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BERKELEY'S COMMONPLACE BOOK

BERKELEY'S COMMONPLACE BOOK

EDITED WITH INTRODUCTION
NOTES AND INDEX

BY

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The Development of Berkeley's Philosophy
etc.

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EDITOR'S PREFACE

BERKELEY'S *Commonplace Book* is enjoying a revival of interest. The appearance in the last few years of translations and commentaries in Italian and German is a symptom of this renewed attention on the Continent. In English-speaking countries the need has been increasingly felt of a new edition in English which would reproduce the manuscript without the defects which have long been known to characterise the only English editions, those of Campbell Fraser in his editions of Berkeley's Complete Works, and would also take account of the results of recent study in Great Britain and the United States, as well as on the Continent of Europe.

It was a particular pleasure to me to undertake the editing of this new edition. The *Commonplace Book* has been my constant companion for over twenty years, and I have recently had the satisfaction of knowing that my own work on Berkeley has not been without influence on the renaissance of interest in the *Commonplace Book*.

The text of this edition is based on a careful examination of the manuscript (British Museum Add. MS. 39305) by Mr A. J. Watson.

I wish to acknowledge the help that I have derived from the recent editions of the *Commonplace Book* in Italian and German respectively of Mario Manlio Rossi

and Andreas Hecht, detailed reference to which is made in the Introduction. And, like every student of Berkeley, I owe a debt of enduring gratitude to the work of Campbell Fraser.

G. A. JOHNSTON

Geneva
March 1930

EDITOR'S INTRODUCTION

THE *Commonplace Book* was written between 1705 and 1708, while Berkeley was still at Trinity College, Dublin, which he entered in 1700 at the age of 15. It consists of notes, queries and observations set down as they happened to occur in the course of his reading, thinking and discussion.

The importance of the *Commonplace Book* is twofold. In the first place, it is of great philosophical interest for the light it throws on the origin and development of Berkeley's thought. Never intended for publication, it contains a free expression of Berkeley's attitude towards the philosophers and mathematicians from whom he was still learning. In its disjointed jottings, it reveals the various influences to which Berkeley's mind was exposed during this formative period. It also shows, in the doubts and hesitations expressed in some of the aphorisms, some of the stages through which the New Principle passed in Berkeley's mind.

But the *Commonplace Book* is more than this. It constitutes a faithful picture of the philosophical environment of the time. For there is no doubt that the *Commonplace Book* is closely connected with the Philosophical Society at Trinity College which Berkeley founded on 10 January 1705/6. This Society, the statutes of which are written in the *Commonplace Book*, though not in Berkeley's handwriting, originally had

very comprehensive aims, members being entitled to 'propose to the assembly their inventions, new thoughts or observations in any of the sciences'. On 7 December 1706, however, fresh rules were made which restricted the scope of the society to 'discourse on some part of the new philosophy'. The 'new philosophy' refers primarily to the fresh impetus given to speculative activity by the work of Locke and Newton. The thinking of the generation before Berkeley's had still been limited by the narrow conceptions of the Schoolmen, and Swift, who took his degree at Trinity College, Dublin, only twenty years before Berkeley, was obliged to struggle with the 'Logics' of Burgersdicius, Keckermannus and Smiglecius and the 'Manuals' of Baronius and Scheiblerus. But Trinity had given a welcome to Locke's *Essay*, published in 1690, and Newton's *Principia*, published in 1687; and these were the dominant forces in the intellectual environment in which Berkeley found himself in the opening years of the eighteenth century. The *Commonplace Book* is, as Rossi suggests,[1] the echo of the thought of the time. Berkeley set down in it, not only his own observations, but also the reflections of his fellow-students, and particularly those of the members of the Society as they were expressed at the weekly meetings. Every thinker is the child of his age, and Berkeley, with all his originality, is no exception to the rule.

Some of the commentators on the *Commonplace Book* have remarked on the narrowness of the scope of Berkeley's reading which it reveals. 'It does not seem',

[1] *Gli Appunti*, p. xiii.

writes Campbell Fraser, 'that his scholarship or philosophical learning was extensive'.[1] And Rossi goes further. He refers to Berkeley in the *Commonplace Book* as 'incolto ed audace, discettatore occasionale e lettore sbadato. Le sue citazioni sono spesso di seconda mano et le sue letture riprese da terze persone'.[2]

It is difficult to agree with this view. In the first place, as the *Commonplace Book* grew out of the discussions of the Society, which explicitly concerned itself with the 'new philosophy', it is natural that the centre of the stage should be held by Locke and Newton; it is natural also that little or no reference should be made to the Greek philosophers or the Schoolmen. But it would be rash to assume that, because Berkeley does not refer to them, he was therefore unacquainted with them. The plain fact was that, to him, almost blinded by the brilliance of the 'new philosophy', Greek philosophy and the Schoolmen seemed to have little contribution to make to the problems in which he was primarily interested. In the field of the 'new philosophy' the *Commonplace Book* shows that Berkeley was both widely and deeply read. His study had not been confined to the great figures, Locke, Descartes, Malebranche, Hobbes, Liebniz, Spinoza and Newton. It is clear that he was acquainted with the work of lesser lights such as John Sergeant and Henry More, and his detailed references to the work of the contemporary mathematicians, both English and Continental, are very numerous. And when, further, we

[1] *Works of Berkeley*, I, 4.
[2] *Gli Appunti*, p. xii.

remember Berkeley's references to publications such as the *Philosophical Transactions* of the Royal Society and the *Acta Eruditorum* of Leipzig, it becomes increasingly difficult to subscribe to the view that Berkeley's reading at the time the *Commonplace Book* was written was either superficial or limited.

The main interest of the *Commonplace Book* lies, however, not in its reflection of Berkeley's reading, but in its revelation of his thinking. The *Commonplace Book* is a record of his thinking rather than a register of his reading. In this 'day-book',[1] Berkeley set down, as they happened to occur from day to day, the problems which arose in his mind, and the solutions which he envisaged. This chronological character of the order of the entries in the *Commonplace Book* makes it difficult to observe any logical sequence from page to page. The question has even been asked whether any such logical sequence exists, and whether it would not be better to rearrange the entries according to subject. This is the method adopted by Rossi. The German editor, however, follows the chronological order.

I have considered it best to print the aphorisms in their chronological order, as written by Berkeley, but to provide an index of subjects with references to all the aphorisms that fall under them. I have adopted this order, not only because such a procedure is the only one historically defensible, but also because it is possible to discern, even in the chronological sequence, a certain logical development of thought.

[1] The French translator (Gourg) calls it a 'journal', the German (Hecht) a 'Tagebuch'.

The *Commonplace Book* begins, after the 'Queries', which refer, without exception, to various theories of Locke, with a series of significant aphorisms on the problem of time and eternity. The view Berkeley is seeking to express is that the existence of time is its duration and nothing else, and from this he seems to leap to the conclusion that existence in general is duration and nothing else. But duration appears to correspond to nothing objective, and to be a mere subjectivity. Duration has no existence in itself or in an external world of things. It is simply a sensation or a series of sensations, and therefore it is mind-dependent. Further, inasmuch as existence and duration are identical, the conclusion would seem to follow that all existence is mind-dependent. From the proposition that time is simply a sensation, or, as Berkeley says elsewhere, simply a perception—*tempus est percipi*, the further proposition follows that existence is simply a perception or series of perceptions—*esse est percipi*.

In the next few entries Berkeley extends the scope of this proposition. Extension, equally with duration, is mind-dependent, and in general the argument may be applied to all primary qualities. Primary qualities, equally with secondary ones, are mind-dependent. The whole existing order depends on mind. The determinate existence of the world is due to the fact that it is an object of thought or perception. Hence the source of existence must be in that on which existence depends, and that is consciousness. Existence, we may say, is of two kinds; it is either 'perceiving' or 'being perceived'. The universal and comprehensive truth is

esse est aut percipere aut percipi. This is the essence of Berkeley's theory of knowledge and existence. (Aphorisms 1–25.)

The problems which become prominent in the next few pages of the *Commonplace Book* relate to permanence, identity and continuity in regard to both things and persons. Has extension which, we have seen, is simply a collection of ideas, any permanence? Further, has relation any self-identity; what is the relation of the extension that I perceive to the extension that you perceive? Lastly, if extension consists of discrete ideas, particular perceptions, what do we mean by speaking of its continuity? These problems of permanence, identity and continuity are next considered in relation to persons. If the existence of persons consists in perceiving, what becomes of them when they are not actually perceiving? If we say that continuity and identity of personality consists in the will, and that the will is constantly active, what is the relation of the finite will to the will of God? Can the problem of permanence be solved otherwise than by reference to God? (Aphorisms 26–200.)

The next main group of problems relates to the facts of vision. Berkeley indicates the main outlines of his new theory of vision, and states its two fundamental principles, namely, that there is no necessary connection between optic angles and extension, and that distance is not immediately perceived by sight. The relation is entirely arbitrary between visual signs and the distance or magnitude they suggest. Distance and magnitude are never immediately perceived by finite persons. They

are suggested to us by the signs which in our experience uniformly accompany them, and can only be inferred from these signs. (Aphorisms 201–307.)

The next few pages are devoted, in the main, to mathematical preoccupations. Mathematics enjoyed extraordinary prestige at the time, and Berkeley clearly realised that his theory was open to serious criticism from the mathematical standpoint. The mathematical doctrine of the nature of infinitesimals was perhaps the most dangerous obstacle with which his theory was faced. Berkeley saw clearly that if extension consists of *minima sensibilia*, infinite divisibility is impossible, and the mathematical doctrine of infinitesimals falls to the ground. But Berkeley's view comes into conflict also with time-honoured mathematical theorems. If extension consists of *minima sensibilia*, then not all lines are capable of exact bisection, and the theorem of the incommensurability of the side and diagonal of the square would have to be denied. It was obviously of capital importance for Berkeley to overcome these difficulties. (Aphorisms 308–395.)

The next section of the book consists, for the most part, of the examination of problems with which Berkeley intended to deal in the *Principles*. It is worth noting that in these later pages of the *Commonplace Book* Berkeley rarely refers to questions relating to the psychology of vision, no doubt because by this time the *New Theory of Vision* was already in manuscript. On the other hand, he was thinking about the relation of the "New Principle" to the problems of religion and morality, including the nature of soul or will, which he

intended to deal with in detail in a second volume of the *Principles*. (Aphorisms 396–536.)

In the last part of the book no one group of problems occupies Berkeley's attention for any length of time. It is clear that at this period, the main outlines of his own views being already formulated either in his mind or on paper, he was reading and re-reading Locke, Newton, Descartes, Hobbes, Malebranche, Spinoza and others, mainly in order to consider what criticisms could be advanced against his views from the various standpoints that they maintained. (Aphorisms 537–953.)

It will be clear from this brief summary of the main problems with which the *Commonplace Book* deals that it fulfilled a practical purpose as an instrument to facilitate Berkeley's work on the books and articles which he was then engaged on preparing. Its importance from this standpoint becomes obvious when the dates of writing or publication of some of Berkeley's works are borne in mind. *An Essay towards a New Theory of Vision* was published in 1709, and *A Treatise concerning the Principles of Human Knowledge* in 1710.[1] In addition, three minor mathematical works were written in this period, *Arithmetica absque Algebra aut Euclide demonstrata*, and *Miscellanea Mathematica*, both written in 1705 and published in 1707, and the essay *Of Infinites*, written in 1706. In the case of the two principal works, the *New Theory of Vision* and the

[1] A rough draft of the Introduction to the *Principles* was written in 1708. See Fraser's edition of *Berkeley's Works*, vol. III, Appendix A.

Principles, the *Commonplace Book* contains drafts evidently intended for incorporation in the texts of these works.

The Text

The text of the *Commonplace Book* is in Berkeley's handwriting in a small quarto volume now in the British Museum (Add. MS. 39305). The bottom part of half of the manuscript is much decayed, and the writing is in some instances almost illegible.

The manuscript volume contains, in addition to the text of the *Commonplace Book*, the following documents not reprinted here.

1. Statutes of a Society consisting of eight persons, Jan. 10, A.D. 1705/6. (4 pp.)
2. Rules of the Society agreed upon 7 Dec. 1706. (1 p.)

(Neither of these two documents is in Berkeley's handwriting.)

3. Draft of part of Appendix to *Miscellanea Mathematica* (published in 1707), and formulae for combinations in the *Ludus algebraicus*. (2 pp.)
4. *Description of the Cave of Dunmore at Kilkenny*. (10 pp.)
5. *De Motu*: seven axioms and two problems in dynamics. (2 pp.)
6. Fragment of the skeleton of a sermon. (9 lines.)

Apart from the omission of these items, which have no essential relation to the contents of the *Commonplace Book*, the text printed in this edition is a complete reproduction of the manuscript.

The text of the *Commonplace Book* was discovered by Campbell Fraser among the Berkeley manuscripts in the possession of Archdeacon Rose, and was first published by him in 1871, in volume IV of his edition of Berkeley's works. It was reprinted, with a few minor corrections, in vol. I of Campbell Fraser's 1901 edition of Berkeley's works, and it is in this form that the *Commonplace Book* is known to English readers.

The text published by Fraser has rendered invaluable service to students of Berkeley. It must, however, be recognised that Fraser's edition is not entirely satisfactory, and that for three reasons.

In the first place, a considerable amount of matter in the manuscript was voluntarily omitted by Fraser, on the ground that it constituted a repetition of other matter, or was not relevant to the development of Berkeley's thought. But Berkeley's repetitions are, like Kant's, never entirely negligible. The same fundamental ideas may be advanced, but they have been suggested in slightly different ways, and it is worth while to the historical student to know this. Even less defensible is the omission by Fraser of the so-called 'Queries' (aphorisms II–XXIV of this edition). These were omitted by Fraser from the text of the *Commonplace Book* and inserted by him in his *Life and Letters of Berkeley*, pp. 23–27, between the Statutes of 1705–6 and the Rules of 1706. Further, Fraser, not content with omitting some of the manuscript, added to the text printed by him in the 1901 edition (vol. I, p. 92) some matter taken from another manuscript of Berkeley.

The text of Fraser is unsatisfactory, in the second

place, because it contains many errors of transcription. While most of these are of little or no importance from the point of view of the philosophic content of the aphorisms, some of them are of great philosophic interest. Attention was first drawn to these errors of transcription by Theodor Lorenz, who published some of the corrections in *Mind*, N.S. XIII, 1904, pp. 304 ff. and in *Archiv für Geschichte der Philosophie*, XVIII, 1905, pp. 554 ff. Lorenz incorporated the rest of his corrections in the copy of Fraser's edition in use in the Philosophical Seminar in Berlin, and these were made available to a wider public by Benno Erdmann in his 'Berkeleys Philosophie im Lichte seines wissenschaftlichen Tagebuchs', *Abh. Pr. Akad.* 1919, Phil. Hist. Klasse, Nr. 8. The careful collation of the manuscript made for the present edition by Mr A. J. Watson has revealed still further errors of transcription in Fraser's text.

The text of Fraser is unsatisfactory, in the third place, because the order in which the entries are printed in his edition is not the order in which Berkeley wrote them. It was Theodor Lorenz who first drew attention to this. In his article in *Archiv für Geschichte der Philosophie*, XVIII, 1905, pp. 554 ff. Lorenz pointed out that the manuscript volume consists of two notebooks, bound together. Evidence of the former bindings remains, and there is a slight difference in the quality and texture of the paper. One notebook comprises the aphorisms numbered 396–902 in the present edition (those printed by Fraser on pp. 7–58 down to and including the quotation from Clov.). For convenience this may be

called Notebook A. The other notebook contains the Statutes and Queries followed by aphorisms 1–395 and 903–953 (those printed by Fraser on pp. 58–92). Let us call this Notebook B. It was suggested by Lorenz that these two notebooks had accidentally been bound together in the wrong order.

In my *Development of Berkeley's Philosophy* I adopted this supposition. I pointed out that, in order to substantiate Lorenz's view, it was necessary to show, on internal evidence, that Notebook A must be later than Notebook B, and I advanced various arguments in support of this view. As the question is one of capital importance, it is worth while summarising these arguments.

(1) Notebook A contains the date 'August 28th, 1708'. Notebook B contains the date 'January 10, 1705/6' and 'December 7, 1706'. There is no doubt as to these dates; consequently A must be later than B.

(2) That B was written as early as 1706, and therefore before A, is confirmed by the discovery made by Prof. S. P. Johnston of an essay by Berkeley entitled 'Of Infinites'. On external and internal evidence Prof. Johnston assigned this essay to the period 1706–7 (*Hermathena*, XI, 181–2); and a comparison between it and the *Commonplace Book* shows that it was certainly written at the same time as aphorisms 317–95 (Fraser's pp. 83–9) which occur in B.

(3) Berkeley tells us (*Works*, II, 19) that one of his earliest enquiries was about time. Now the only group of entries in the *Commonplace Book* concerning time is the series of aphorisms 1–16 (Fraser's pp. 58 ff.). This

would be one of his earliest enquiries only if B is prior to A.

(4) Further confirmatory evidence of the priority of B is supplied by a consideration of the subjects dealt with in the two notebooks. In A the references are to the *Principles*, and the first few pages of A show that he had already reached the stage of drafting the *Principles*, and was even paying attention to the phrasing of important passages. On the other hand, B contains almost the whole of the argument of the *New Theory of Vision*, which was certainly developed before the *Principles*. Again, A contains two or three fairly certain references to B, and there are no references from B to A. Detailed instances of these references are given in my *Development of Berkeley's Philosophy*, p. 23 n.

Lorenz's view of the correct order of the entries in the *Commonplace Book*, supported by my arguments, has been adopted by all subsequent students of the *Commonplace Book*, and I have had no hesitation in adopting that order in the present edition.[1]

Translations of the *Commonplace Book* with notes have been published in French, Italian and German.

The French translation is that of Raymond Gourg

[1] One other point with regard to order. The present edition places aphorisms 903–53 (Fraser's pp. 89–92) after Notebook A, although they occur at the end of Notebook B. In this I am in agreement with Lorenz, Erdmann, Rossi and Hecht. The reason is that it is now generally accepted that Berkeley left blank a few pages at the end of Notebook B, then filled Notebook A, and finally returned to fill the blank pages at the end of B with the 19 numbered axiomatic statements of the salient features of the New Principle.

(*Le Journal philosophique de Berkeley*: étude et traduction. Paris, Alcan, 1908). Gourg translates the text of Fraser and follows his order.

The Italian volume is that of Mario Manlio Rossi (*Giorgio Berkeley. Gli Appunti* [Commonplace Book] tradotti, commentati, ordinati da Mario Manlio Rossi. Con introduzione, bibliografía et indici. Bologna, Cappelli, 1924). Rossi translates Fraser's text, but he was aware of Lorenz's corrections, with the exception of those first made available by Erdmann. Rossi does not print in either Fraser's or Lorenz's order, but rearranges the aphorisms, according to subject-matter, in seven chapters, each with numerous sections. The chapters contain the aphorisms relating respectively to I. Logic and Words, II. Mathematics, III. Theory of Vision, IV. The New Principle, V. Mind and Will, VI. Science and Scientific Concepts, and VII. Personal Note-book.

The German translation is that of Andreas Hecht (*Berkeley. Philosophisches Tagebuch* [Commonplace Book] übersetzt, eingeleitet und mit Anmerkungen und Registern versehen von Andreas Hecht. Der Philosophischen Bibliothek, Band 196. Leipzig, Felix Meiner, 1926). Hecht translates Fraser's text, taking account of all Lorenz's corrections, and adopts Lorenz's order and Erdmann's numbering of the aphorisms.

In the present edition I have numbered all the aphorisms. This has seemed desirable for convenience of reference. All the translators of the *Commonplace Book* have found it necessary to number them. It has not been possible for me to adopt the numbering of any

of the translators. There are sufficient reasons for this. Gourg numbers the aphorisms in accordance with the erroneous order in which they are printed by Campbell Fraser. Rossi numbers in accordance with the correct order, but runs together under the same numbers some of the aphorisms which were written by Berkeley as separate entries. Hecht, who follows Erdmann's numbering, breaks the sequence in order to indicate the aphorisms, not to be found in Fraser's edition, which were first transcribed by Lorenz, or some of the aphorisms which Berkeley wrote on the margin or on the opposite blank folio. In a fresh English edition of the *Commonplace Book* there has seemed no good reason for adopting Erdmann's system, particularly as the aphorisms were not numbered by Campbell Fraser. I have therefore numbered the aphorisms consecutively in the order in which they were written by Berkeley. The 'Queries' written between the Statutes of January 1705/6 and the Rules of December 1706 are numbered on the Roman system.[1] All others run on consecutively with Arabic numerals.

One or two further explanations with regard to the text are necessary. Berkeley wrote a certain number of aphorisms or individual words in the margin of the manuscript. These are printed in this edition in square brackets [ ]. He wrote other aphorisms on the opposite blank folio. These are printed in pointed brackets ⟨ ⟩. Curved brackets ( ) indicate words or sentences enclosed within brackets by Berkeley himself. A row of

[1] In this my numbering agrees in principle with Erdmann, Rossi and Hecht.

asterisks in the text indicates that the ink in the manuscript is so faded as to be illegible. A row of dots shows that the sentence is left incomplete in the manuscript. Berkeley's spelling and punctuation have in all cases been followed, even in their inconsistencies. Finally, the letters, I., M., P., E., T., S., G., Mo., N., printed in the margin in this edition were written in the margin of the manuscript by Berkeley opposite the entries to which they refer. The significance of the letters is as follows:

I. = Introduction.
M. = Matter.
P. = Primary and Secondary Qualities.
E. = Existence.
T. = Time.
S. = Soul-Spirit.
G. = God.
Mo. = Moral Philosophy.
N. = Natural Philosophy.

COMMONPLACE BOOK

I. ‹*Mem.* The following statutes were agreed to & sign'd by the society consisting of eight persons, Jan. 10. A.D. 1705.›

II. *Qu.* Whether number be in the objects w^th^out the mind? L. b. 2. c. 8. s. 9. Why powers mediately thought such, immediately perceivable not. b. 2. c. 8. s. 19.

III. Whether solids seen. b. 2. c. 9. s. 9.

IV. Whether discerning, remembering, knowing, comparing, abstracting &c. be simple or complex ideas; the same with or different from perception?

V. Whether taste be a simple idea since it is combin'd with existence, unity, pleasure or pain?

VI. Whether all the last-mention'd do not make a complex idea as well as the severall component ideas of a Horse, shilling &c.

VII. Wherein brutes distinguish'd from men?

VIII. Wherein idiots from mad men?

IX. Whether any knowlege without memory? God space. b. 2, 13, 26 & 15. 2.

X. Rotation of a fire-brand why makes a circle.

XI. Why men more easily admit of infinite duration than infinite expansion?

XII. Demonstrations in numbers: whether more general in their use for the reason Locke gives. b. 2. c. 16. s. 4.

XIII. Inches &c. not settled stated lengths against. b. 2. c. 13. s. 4.

XIV. *Qu.* Whether motion, extension & time be not definable & therefore complete ideas.

XV. *Qu.* Whether the clearness & distinctness of each greater mode of number be so very signal.

XVI. *Qu.* Why Locke thinks we can have ideas of no more modes of number than we names for?

XVII. Not all God's attributes properly infinite.

XVIII. Why other ideas besides number &c. not capable of infinity? Not rightly solv'd by Locke.

XIX. Infinity & infinite.

XX. No such thing as an obscured, confused idea of infinite space.

XXI. Power is not perceiv'd by sense.

XXII. Locke not to be blam'd if tedious about innate ideas, soul always thinking, extension not essence of body; time can be conceiv'd and measur'd when no motion was, will is not free &c.

XXIII. A thing may be voluntary tho' necessary; query whether it can be involuntary tho' free.

XXIV. Things belonging to Reflection are for the most part express'd by figures borrow'd from things sensible.

1. One eternity greater than another of y^{e} same kind.

2. In w^{t} sense eternity may be limited.

G.T. 3. Whether succession of ideas in y^{e} Divine intellect?

T. 4. Time train of ideas succeeding each other.

5. Duration not distinguish'd from existence.

6. Succession explain'd by before, between, after, & numbering.

7. Why time in pain longer than time in pleasure?

8. Duration infinitely divisible, time not so.

T. 9. The same *τὸ νῦν* not common to all intelligences.

10. Time thought infinitely divisible on account of its measure.

11. Extension not infinitely divisible in one sense.

12. Revolutions immediately measure train of ideas, mediately duration.

T. 13. Time a sensation; therefore onely in y^e^ mind.

14. Eternity is onely a train of innumerable ideas. Hence the immortality of y^e^ soul easily conceiv'd, or rather the immortality of the person, that of y^e^ soul not being necessary for ought we can see.

15. Swiftness of ideas compar'd with y^t^ of motions shews the wisdom of God.

16. W^t^ if succession of ideas were swifter, w^t^ if slower?

M. 17. ffall of Adam, rise of idolatry, rise of Epicurism & Hobbism, dispute about divisibility of matter, &c. expounded by material substances.

18. Extension a sensation, therefore not without the mind.

M. 19. In the immaterial hypothesis, the wall is white, fire hot, &c.

20. Primary ideas prov'd not to exist in matter; after the same manner y^t^ secondary ones are prov'd not to exist therein.

21. Demonstrations of the infinite divisibility of extension suppose length without breadth, or invisible length, w^ch^ is absurd.

M. 22. World w^thout thought is *nec quid*, *nec quantum*, *nec quale*, &c.

M. 23. 'Tis wondrous to contemplate y^e^ World empty'd of all intelligences.

24. Nothing properly but persons, i.e. conscious

things, do exist. All other things are not so much existences as manners of y^e^ existence of persons.

25. *Qu.* about the soul, or rather person, whether it be not compleatly known?

26. Infinite divisibility of extension does suppose the external existence of extension; but the later is false, ergo y^e^ former also.

27. *Qu.* Blind man made to see, would he know motion at 1^st^ sight?

28. Motion, figure, and extension perceivable by sight are different from those ideas perceived by touch w^ch^ goe by the same name.

29. Diagonal incommensurable w^th^ y^e^ side. *Quære* how this can be in my doctrine?

N. 30. *Qu.* how to reconcile Newton's 2 sorts of motion with my doctrine?

31. Terminations of surfaces & lines not imaginable *per se.*

32. Molyneux's blind man would not know the sphere or cube to be bodies or extended at first sight.

33. Extension so far from being incompatible w^th^, y^t^ 'tis impossible it should exist without thought.

M. 34. Extension itself or anything extended cannot
S. think—these being meer ideas or sensations, whose essence we throughly know.

35. No extension but surface perceivable by sight.

M. 36. W^n^ we imagine 2 bowls v. g. moving in vacuo, 'tis only conceiving a person affected with those sensations.

M. 37. Extension to exist in a thoughtless thing [or rather in a thing void of perception—thought seeming to imply action], is a contradiction.

38. *Qu.* if visible motion be proportional to tangible motion?

T. 39. In some dreams succession of ideas swifter than at other times.

M. 40. If a piece of matter have extension, that must be determined to a particular bigness & figure, but &c.

41. Nothing corresponds to our primary ideas wthout but powers. Hence a direct & brief demonstration of an active powerfull being, distinct from us, on whom we depend.

42. The name of colours actually given to tangible qualitys, by the relation of y^{e} story of y^{e} German Count.

43. *Qu.* How came visible & tangible qualitys by the same name in all languages?

44. *Qu.* Whether Being might not be the substance of the soul, or (otherwise thus) whether Being, added to y^{e} faculties, compleat the real essence and adequate definition of the soul?

N. 45. *Qu.* Whether, on the supposition of external bodies, it be possible for us to know that any body is absolutely at rest, since that supposing ideas much slower than at present, bodies now apparently moving would then be apparently at rest?

M. 46. W^{t} can be like a sensation but a sensation?

47. *Qu.* Did ever any man see any other things besides his own ideas, that he should compare them to these, and make these like unto them?

T. 48. The age of a fly, for ought that we know, may be as long as y^{t} of a man.

49. Visible distance heterogeneous from tangible distance demonstrated 3 several ways:—

1st. If a tangible inch be equal or in any other reason to a visible inch, thence it will follow yt unequals are equals, wch is absurd: for at wt distance would the visible inch be placed to make it equal to the tangible inch?

2d. One made to see that had not yet seen his own limbs, or any thing he touched, upon sight of a foot length would know it to be a foot length, if tangible foot & visible foot were the same idea—sed falsum id, ergo et hoc.

3dly. From Molyneux's problem, wch otherwise is falsely solv'd by Locke and him.

√ M. 50. Nothing but ideas perceivable.

51. A man cannot compare 2 things together without perceiving them each. Ergo, he cannot say anything √ wch is not an idea is like or unlike an idea.

52. Bodies &c. do exist even wn not perceived—they being powers in the active being.

53. Succession a simple idea, ‹succession is an abstract, i.e. an inconceivable idea,› Locke cap. 7.

54. Visible extension is (proportional to tangible extension, also) is encreated & diminish'd by parts. Hence taken for the same.

55. If extension be without the mind in bodies. *Qu.* whether tangible or visible, or both?

56. Mathematical propositions about extension & motion true in a double sense.

57. Extension thought peculiarly inert, because not accompany'd w^th^ pleasure & pain: hence thought to exist in matter; as also for that it was conceiv'd common to 2 senses, ⟨as also the constant perception of 'em⟩.

58. Blind at 1^st^ sight could not tell how near what he saw was to him, nor even whether it be w^th^out him or in his eye. *Qu.* Would he not think the later?

59. Blind at 1^st^ sight could not know y^t^ w^t^ he saw was extended, until he had seen and touched some one self-same thing—not knowing how *minimum tangibile* would look in vision.

M. 60. *Mem.* That homogeneous particles be brought in to answer the objection of God's creating sun, plants, &c. before animals.

61. In every bodie 2 infinite series of extension—the one of tangible, the other of visible.

62. All things to a blind [man] at 1^st^ seen in a point.

63. Ignorance of glasses made men think extension to be in bodies.

M. 64. Homogeneous portions of matter—useful to contemplate them.

65. Extension if in matter changes its relation w^th^ *minimum visibile*, w^ch^ seems to be fixt.

66. *Qu.* whether M. V. be fix'd?

M. 67. Each particle of matter if extended must be infinitely extended, or have an infinite series of extension.

M. 68. If the world be granted to consist of Matter, 'tis the mind gives it beauty and proportion.

69. W^t^ I have said onely proves there is no proportion at all times and in all men between a visible & tangible inch.

70. Tangible and visible extension heterogeneous, because they have no common measure; also because their simplest constituent parts or elements are specifically distinct, viz. *punctum visibile* & *tangibile*. *N. B.* The former seems to be no good reason.

M. 71. By immateriality is solv'd the cohesion of bodies,
N. or rather the dispute ceases.

72. Our idea we call extension neither way capable of infinity, i.e. neither infinitely small or great.

73. Greatest possible extension seen under an angle w^ch^ will be less than 180 degrees, the legs of w^ch^ angle proceed from the ends of the extension.

M. 74. Allowing there be extended, solid, &c. substances without the mind, 'tis impossible the mind should know or perceive them; the mind, even according to the materialists, perceiving onely the impressions made upon its brain, or rather the ideas attending these impressions.

75. Unite *in abstracto* not at all divisible, it being as it were a point, or with Barrow nothing at all; *in concreto* not divisible *ad infinitum*, there being no one idea diminishable *ad infinitum*.

M. 76. Any subject can have of each sort of primary qualities but one particular at once. Locke, b. 4. c. 3. s. 15.

77. *Qu.* whether we have clear ideas of large numbers themselves, or onely of their relations?

M. 78. Of solidity see L. b. 2. c. 4. s. 61, 65, 66. If any one ask w^t^ solidity is, let him put a flint between his hands and he will know. Extension of body is continuity of solid, &c.; extension of space is continuity of unsolid, &c.

79. ⟨Why may not I say visible extension is a continuity of visible points, tangible extension is a continuity of tangible points?⟩

M. 80. *Mem.* That I take notice that I do not fall in w^th^ sceptics, Fardella, &c., in that I make bodies to exist certainly, w^ch^ they doubt of.

M. 81. I am more certain of y^e^ existence & reality of bodies than Mr Locke; since he pretends onely to w^t^ he calls sensitive knowlege, whereas I think I have demonstrative knowlege of their existence—by them meaning combinations of powers in an unknown substratum.

M. 82. Our ideas we call figure & extension, not images of the figure and extension of matter; these (if such there be) being infinitely divisible, those not so.

83. 'Tis impossible a material cube should exist, because the edges of a cube will appear broad to an acute sense.

84. Men die, or are in [a] state of annihilation, oft in a day.

S. 85. Powers. *Quaere* whether more or one onely?

86. Lengths abstract from breadths are the work of the mind. Such do intersect in a point at all angles. After the same way colour is abstract from extension.

87. Every position alters the line.

88. *Quaere* whether ideas of extension are made up of other ideas, v.g. idea of a foot made up of general ideas of an inch?

89. The idea of an inch length not one determin'd idea. Hence enquire the reason why we are out in judging of extension by the sight; for w^ch^ purpose 'tis meet also to consider the frequent & sudden changes of extension by position.

90. No stated ideas of length without a minimum.

M. 91. Material substance banter'd by Locke, b. 2. c. 13. s. 19.

M. 92. In my doctrine all absurditys from infinite space &c. cease.

93. *Qu.* whether if (speaking grosly) the things we see were all of them at all times too small to be felt, we should have confounded tangible & visible extension and figure?

T. 94. *Qu.* whether if succession of ideas in the Eternal Mind, a day does not seem to God a 1000 years, rather than a 1000 years a day?

95. But one only colour & its degrees.

96. Enquiry about a grand mistake in writers of dioptricks in assigning the cause of microscopes magnifying objects.

97. *Qu.* whether a blind [man] made to see would at 1^st^ give the name of distance to any idea intromitted by sight; since he would take distance y^t^ he had perceived by *touch* to be something existing without his mind, but he would certainly think that nothing *seen* was without his mind?

S. 98. Space without any bodies being *in rerum natura* would not be extended, as not having parts—in that

parts are assigned to it w^th^ respect to body; from whence also the notion of distance is taken. Now without either parts or distance or mind, how can there be Space, or anything beside one uniform Nothing?

99. Two demonstrations that blind made to see would not take all things he saw to be without his mind, or not in a point—the one from microscopic eyes, the other from not perceiving distance, i.e. radius of the visual sphere.

M. 100. ⟨The trees are in the park, i.e. whether I will or no, whether I imagine anything about them or no. Let me but go thither and open my eyes by day, & I shall not avoid seeing them.⟩

101. Tho' swiftness or slowness of motion depends on our ideas it does not therefore follow, that the same force can impell a body over a greater or less space in proportion to slowness or swiftness of our ideas.

102. By extension blind [man] would mean either the perception caused in his touch by something he calls extended, or else the power of raising that perception; w^ch^ power is without, in the thing termed extended. Now he could not know either of these to be in things visible till he had try'd.

103. Geometry seems to have for its object tangible extension, figures, & motion—and not visible.

104. The reason explain'd why we see things erect, their images being inverted in the eye.

105. A man will say a body will seem as big as before,

tho' the visible idea it yields be less than wᵗ it was; therefore the bigness or tangible extension of the body is different from the visible extension.

106. Number not without the mind in anything, because 'tis the mind by considering things as one that makes complex ideas of them: 'tis the mind combines into one, wᶜʰ by otherwise considering its ideas might make a score of wᵗ was but one just [now].

107. Extension or space no simple idea—length, breadth, & solidity being three severall ideas.

108. Depth or solidity nor perceived by sight.

109. Strange impotence of men. Man without God wretcheder than a stone or tree; he having onely the power to be miserable by his unperformed wills, these having no power at all.

110. Length perceivable by hearing—length & breadth by sight—length, breadth, & depth by touch.

G. 111. Wᵗ affects us must be a thinking thing, for wᵗ thinks not cannot subsist.

112. Number not in bodies, it being the creature of the mind, depending entirely on its consideration, & being more or less as the mind pleases.

113. *Mem. Quære* whether extension be equally a sensation with colour? The mob use not the word extension. 'Tis an abstract term of the Schools.

P. 114. Round figure a perception or sensation in the mind, but in the body is a power. L[ocke], b. 2. c. 8. s. 8.

115. *Mem.* Mark well the later part of the last cited section.

116. Solids, or any other tangible things, are no otherwise seen than colours felt by the German Count.

M. 117. 'Of' and 'thing' causes of mistake.

118. The visible point of he who has microscopical eyes will not be greater or less than mine.

119. *Qu.* Whether the propositions & even axioms of geometry do not divers of them suppose the existence of lines &c. without the mind?

T. 120. Whether motion be the measure of duration? See Locke, b. 2. c. 14. s. 19.

121. Lines & points conceiv'd as terminations different ideas from those conceiv'd absolutely.

122. Every position alters a line.

S. 123. Blind man at 1st would not take colours to be without his mind; but colours would seem to be in the same place with the colour'd extension: therefore extension would not seem to be without the mind.

124. All visible concentric circles whereof the eye is the centre are absolutely equall.

125. Infinite number—why absurd—not rightly solv'd by Locke.

126. *Qu.* how 'tis possible we should see flats or right lines?

127. *Qu.* why the moon appears greatest in the horizon?

128. *Qu.* why we see things erect when painted inverted?

T. 129. Question put by Mr. Deering touching the thief and paradise.

M. 130. Matter tho' allowed to exist may be no greater than a pin's head.

131. Motion is proportionable to space described in given time.

132. Velocity not proportionable to space describ'd in given time.

M. 133. No active power but the Will: therefore Matter, if it exists, affects us not.

134. Magnitude when barely taken for the *ratio partium extra partes*, or rather for co-existence & succession, without considering the parts co-existing & succeeding, is infinitely, or rather indefinitely, or not at all perhaps, divisible, because it is itself infinite or indefinite. But definite, determined magnitudes, i.e. lines or surfaces consisting of points whereby (together wth distance & position) they are determin'd, are resoluble into those points.

135. Again. Magnitude taken for co-existence and succession is not all divisible, but is one simple idea.

136. Simple ideas include no parts or relations—hardly separated and considered in themselves—not yet rightly singled by any Authour. Instance in power, red, extension, &c.

M. 137. Space not imaginable by any idea received from sight—not imaginable without body moving. Not even then necessarily existing (I speak of infinite space) —for w^{t} the body has past may be conceiv'd annihilated.

M. 138. *Qu.* W^{t} can we see beside colours? what can we feel beside hard, soft, cold, warm, pleasure, pain?

139. *Qu.* Why not taste & smell extension?

140. *Qu.* Why not tangible & visible extensions thought heterogeneous extensions, so well as gustable & olfactible perceptions thought heterogeneous perceptions? or at least why not as heterogeneous as blue & red?

141. Preliminary discourse about singling & abstracting, simple ideas.

142. Moon w^{n} horizontal does not appear bigger as to visible extension than at other times; hence difficulties and disputes about things seen under angles &c. cease.

143. All *potentiæ* alike indifferent.

144. A. B. W^{t} does he mean by his *potentia*? Is it the will, desire, person, or all or neither, or sometimes one, sometimes t'other?

145. No agent can be conceiv'd indifferent as to pain or pleasure.

146. *We* do not, properly speaking, in a strict philosophical sense, make objects more or less pleasant; but the laws of nature do that.

Mo. S. 147. A finite intelligence might have foreseen 4 thousand years agoe the place and circumstances, even the most minute & trivial, of my present existence. This true on supposition that uneasiness determines the will.

S. 148. Doctrines of liberty, prescience, &c. explained by billiard balls.

149. W^{t} should we think of an object plac'd us in the difficulty if we saw it clearly?

150. W^{t} judgement would he make of uppermost and lowermost who had always seen through an inverting glass?

S.Mo. 151. According to Locke we have not liberty as to virtue & vice; the liberty he allows consisting in an indifferency of the operative Faculties, w^ch^ is consecutive to the will, but virtue & vice consist in the will, ergo &c.

152. All lines subtending the same optic angle congruent (as is evident by an easy experiment); therefore they are equal.

153. We have not pure simple ideas of blue, red, or any other colour (except perhaps black) because all bodies reflect heterogeneal light.

154. *Qu.* Whether this be true as to sounds (& other sensations), there being, perhaps, rays of air w^ch^ will onely exhibit one particular sound, as rays of light one particular colour.

155. Colours not definable, not because they are pure unmixt thoughts, but because we cannot easily distinguish & separate the thoughts they include, or because we want names for their component ideas.

156. By Soul is meant onely a complex idea, made up of existence, willing, & perception in a large sense. Therefore it is known and it may be defined.

S. 157. We cannot possibly conceive any active power but the Will.

158. In moral matters men think ('tis true) that they are free; but this freedom is only the freedom of doing as they please; w^ch^ freedom is consecutive to the Will, respecting only the operative faculties.

159. Men impute their actions to themselves because they will'd them, and that not out of ignorance, but whereas they knew the consequences of them, whether good or bad.

160. This does not prove men to be indifferent in respect of desiring.

161. If anything is meant by the *potentia* of A. B. it must be desire; but I appeal to any man if his desire be indifferent, or (to speak more to the purpose) whether he himself be indifferent in respect of w^{t} he desires till after he has desired it; for as for desire itself, or the faculty of desiring, that is indifferent, as all other faculties are.

162. Actions leading to heaven are in my power if I will them: therefore I will will them.

163. *Qu.* concerning the progression of Wills *in infinitum.*

164. Herein mathematiques have the advantage over metaphysiques and morality. Their definitions, being of words not yet known to y^{e} learner, are not disputed; but words in metaphysiques & morality, being mostly known to all, the definitions of them may chance to be controverted.

M. 165. The short jejune way in mathematiques will not do in metaphysiques & ethiques: for y^{t} about mathematical propositions men have no prejudices, no anticipated opinions to be encounter'd; they not having yet thought on such matters. 'Tis not so in the other 2 mentioned sciences. A man must [there] not onely demonstrate the truth, he must also vindicate it against scruples and established opinions w^{ch} contradict it. In short, the dry, strigose, rigid way will not suffice. He must be more ample & copious, else his demonstration, tho' never so exact, will not go down with most.

166. Extension seems to consist in variety of homogeneal thoughts co-existing without mixture.

167. Or rather visible extension seems to be the coexistence of colours in y^e^ mind.

S. 168. Enquiring and judging are actions w^ch^ depend on
Mo. the operative faculties, w^ch^ depend on the Will, w^ch^ is determin'd by some uneasiness; ergo &c. Suppose an agent w^ch^ is finite perfectly indifferent, and as to desiring not determin'd by any prospect or consideration of good, I say, this agent cannot do an action morally good. Hence 'tis evident the suppositions of A. B. insignificant.

169. Extension, motion, time, number are no simple ideas, but include succession in them, which seems to be a simple idea.

170. *Mem.* To enquire into the angle of contact, & into fluxions, &c.

171. The sphere of vision is equall whether I look onely in my hand or on the open firmament, for 1^st^, in both cases the retina is full; 2^d^, the radius's of both spheres are equall or rather nothing at all to the sight; 3^dly^, equal numbers of points in one & t'other.

172. In the Barrovian case purblind would judge aright.

173. Why the horizontal moon greater?

174. Why objects seen erect?

N. 175. To what purpose certain figure and texture connected w^th^ other perceptions?

176. Men estimate magnitudes both by angles and distance. Blind at 1^st^ could not know distance; or by

pure sight, abstracting from experience of connexion of sight and tangible ideas, we can't perceive distance. Therefore by pure sight we cannot perceive or judge of extension.

177. *Qu.* Whether it be possible to enlarge our sight or make us see at once more, or more points, than we do, by diminishing the *punctum visibile* below 30″?

I. 178. Speech metaphorical more than we imagine;
S. insensible things, & their modes, circumstances, &c. being exprest for the most part by words borrow'd from things sensible. The reason's plain. Hence manyfold mistakes.

S. 179. The grand mistake is that we think we have *ideas* of the operations of our minds. Certainly this metaphorical dress is an argument we have not.

G. 180. *Qu.* How can our idea of God be complex & compounded, when his essence is simple & uncompounded? V. Locke, b. 2. c. 23. s. 35.

181. ‹'Omnes reales rerum proprietates continentur in Deo.' W^{t} means Le Clerc &c. by this?›

182. The impossibility of defining or discoursing clearly of most things proceeds from the fault & scantiness of language, as much perhaps as from obscurity & confusion of thought. Hence I may clearly and fully understand my own soul, extension, &c., and not be able to define them.

M. 183. The substance *wood* a collection of simple ideas. See Locke, b. 2. c. 26. s. 1.

184. *Mem.* concerning strait lines seen to look at them through an orbicular lattice.

185. *Qu.* Whether possible that those visible ideas w^ch^ are now connected with greater extensions could have been connected with lesser extensions,—there seeming to be no *necessary* connexion between those thoughts?

186. Speculums seem to diminish or enlarge objects not by altering the optique angle, but by altering the apparent distance.

187. Hence *Qu.* if blind would think things diminish'd by convexes, or enlarg'd by concaves?

P.N. 188. Motion not one idea. It cannot be perceived at once.

M. 189. *Mem.* To allow existence to colours in the dark,
P. persons not thinking, &c.—but not an absolute actual existence. 'Tis prudent to correct men's mistakes without altering their language. This makes truth glide into their souls insensibly.

M. 190. Colours in y^e^ dark do exist really, i.e. were there
P. light; or as soon as light comes, we shall see them, provided we open our eyes; and that whether we will or no.

191. How the retina is fill'd by a looking-glass?

192. Convex speculums have the same effect w^th^ concave glasses.

193. *Qu.* Whether concave speculums have the same effect w^th^ convex glasses?

194. The reason why convex speculums diminish & concave magnify not yet fully assign'd by any writer I know.

195. *Qu.* Why not objects seen confus'd when that they seem inverted through a convex lens?

196. *Qu.* How to make a glass or speculum which

shall magnify or diminish by altering the distance without altering the angle?

197. No identity (other than perfect likeness) in any individuals besides persons.

N. 198. As well make tastes, smells, fear, shame, wit, virtue, vice, & all thoughts move wth local motion as immaterial spirit.

199. On account of my doctrine, the identity of finite substances must consist in something else than continued existence, or relation to determined time & place of beginning to exist—the existence of our thoughts (which being combined make all substances) being frequently interrupted, & they having divers beginnings & endings.

S. 200. ⟨*Qu.* Whether identity of person consists not in the Will?⟩

201. No necessary connexion between great or little optique angles and great or little extension.

202. Distance is not perceived: optique angles are not perceived. How then is extension perceiv'd by sight?

203. Apparent magnitude of a line is not simply as the optique angle, but directly as the optique angle, & reciprocally as the confusion, &c. (i.e. the other sensations, or want of sensation, that attend near vision). Hence great mistakes in assigning the magnifying power of glasses. Vid. Moly[neux], p. 182.

204. Glasses or speculums may perhaps magnify or lessen without altering the optique angle, but to no purpose.

205. *Qu.* Whether purblind would think objects so much diminished by a convex speculum as another?

206. *Qu.* Wherein consists identity of person? Not in actual consciousness; for then I'm not the same person I was this day twelvemonth but while I think of w^t^ I then did. Not in potential; for then all persons may be the same, for ought we know.

207. *Mem.* Story of Mr. Deering's aunt.

208. Two sorts of potential consciousnesses—natural & præternatural. In the last § but one, I mean the latter.

209. If by magnitude be meant the proportion anything bears to a determined tangible extension, as inch, foot, &c., this, 'tis plain, cannot be properly & *per se* perceived by sight; & as for determin'd visible inches, feet, &c., there can be no such thing obtain'd by the meer act of seeing—abstracted from experience, &c.

210. The greatness *per se* perceivable of the sight is onely the proportion any visible appearance bears to the others seen at the same time; or (which is the same thing) the proportion of any particular part of the visual orb to the whole. But mark that we perceive not it is an orb, any more than a plain, but by reasoning.

211. This is all the greatness the pictures have *per se*.

212. Hereby meerly men cannot at all judge of the extension of any object, it not availing to know the object makes such a part of a sphærical surface except we also know the greatness of the sphærical surface; for a point may subtend the same angle w^th^ a mile, & so create as great an image in the retina, i.e. take up as much of the orb.

213. Men judge of magnitude by faintness and vigorousness, by distinctness and confusion, with some other circumstances, by great & little angles.

214. Hence 'tis plain the ideas of sight which are now connected with greatness might have been connected w^th^ smallness, and vice versâ: there being no necessary reason why great angles, faintness, and distinctness without straining, should stand for great extension, any more than a great angle, vigorousness, and confusion.

215. My end is not to deliver metaphysiques altogether in a general scholastique way, but in some measure to accommodate them to the sciences, and shew how they may be usefull in optiques, geometry, &c.

216. *Qu.* Whether *per se* proportion of visible magnitudes be perceivable by sight? This is put on account of distinctness and confusedness, the act of perception seeming to be as great in viewing any point of the visual orb distinctly, as in viewing the whole confusedly.

217. *Mem.* To correct my language & make it as philosophically nice as possible—to avoid giving handle.

218. If men could without straining alter the convexity of their crystallines, they might magnify or diminish the apparent diameters of objects, the same optic angle remaining.

219. The bigness in one sense of the pictures in the fund is not determin'd; for the nearer a man views them, the images of them (as well as other objects) will take up the greater room in the fund of his eye.

220. *Mem.* Introduction to contain the design of the whole, the nature and manner of demonstrating, &c.

221. Two sorts of bigness accurately to be distinguished, they being perfectly and *toto cælo* different—the one the proportion that any one appearance has to the sum of appearances perceived at the same time wth it, w^{ch} is proportional to angles, or, if a surface, to segments of sphærical surfaces;—the other is tangible bigness.
222. *Qu.* w^{t} would happen if the sphæræ of the retina were enlarged or diminish'd?
223. We think by the meer act of vision we perceive distance from us, yet we do not; also that we perceive solids, yet we do not; also the inequality of things seen under the same angle, yet we do not.
224. Why may I not add, We think we see extension by meer vision? Yet we do not.
225. Extension seems to be perceived by the eye, as thought by the ear.
226. We seem to have clear & distinct ideas of large numbers v.g. 1000 no otherwise than by considering 'em as found by the multiplying of small numbers.

227. As long as the same angle determines the *minimum visibile* to two persons, no different conformation of the eye can make a different appearance of magnitude in the same thing. But, it being possible to try the angle, we may certainly know whether the same thing appears differently big to 2 persons on account of their eyes.
228. If a man could see " objects would appear larger to him than to another; hence there is another sort of purely visible magnitude beside the proportion any appearance bears to the visual sphere, viz. its proportion to the M. V.

229. Were there but one and the same language in the world, and did children speak it naturally as soon as born, and were it not in the power of men to conceal their thoughts or deceive others, but that there were an inseparable connexion between words & thoughts, so y^t *posito uno, ponitur alterum* by the laws of nature; *Qu.* would not men think they heard thoughts as much as that they see extension ⟨distance⟩.

230. All our ideas are adæquate: our knowlege of the laws of nature is not perfect & adæquate.

M. 231. Men are in the right in judging their simple ideas
P. to be in the things themselves. Certainly heat & colour is as much without the mind as figure, motion, time, &c.

232. We know many things w^ch we want words to express. Great things discoverable upon this principle. For want of considering w^ch divers men have run into sundry mistakes, endeavouring to set forth their knowlege by sounds; w^ch foundering them, they thought the defect was in their knowlege, w^n in truth it was in their language.

233. *Qu.* Whether the sensations of sight arising from a man's head be liker the sensations of touch proceeding from thence or from his legs?

234. Or, Is it onely the constant & long association of ideas entirely different that makes me judge them the same?

235. W^t I see is onely variety of colours & light. W^t

I feel is hard or soft, hot or cold, rough or smooth, &c. W^{t} resemblance have these thoughts with those?

236. A picture painted wth great variety of colours affects the touch in one uniform manner. I cannot therefore conclude that because I see 2, I shall feel 2; because I see angles or inequalitys, I shall feel angles or inequalitys. How therefore can I—before experience teaches me—know that the visible leggs are (because 2) connected wth the tangible ones, or the visible head (because one) connected wth the tangible head?

M. 237. All things by us conceivable are—

1st, thoughts;

2ndly, powers to receive thoughts;

3rdly, powers to cause thoughts;

neither of all w^{ch} can possibly exist in an inert, senseless thing.

238. An object wthout a glass may be seen under as great an angle as wth a glass. A glass therefore does not magnify the appearance by the angle.

S. 239. Absurd that men should know the soul by idea—ideas being inert, thoughtless. Hence Malbranch confuted.

240. I saw gladness in his looks. I saw shame in his face. So I see figure or distance.

241. *Qu.* Why things seen confusedly thro' a convex glass are not magnify'd?

242. Tho' we should judge the horizontal moon to be more distant, why should we therefore judge her to be greater? What connexion betwixt the same angle, further distant, and greaterness?

N. 243. My doctrine affects the essences of the Corpuscularians.

244. Perfect circles, &c. exist not without (for none can so exist, whether perfect or no), but in the mind.

245. Lines thought divisible *ad infinitum*, because they are suppos'd to exist without. Also because they are thought the same when view'd by the naked eye, & w^{n} view'd thro' magnifying glasses.

246. They who knew not glasses had not so fair a pretence for the divisibility *ad infinitum*.

247. No idea of circle, &c. in abstract.

248. Metaphysiques as capable of certainty as ethiques, but not so capable to be demonstrated in a geometrical way; because men see clearer & have not so many prejudices in ethiques.

249. Visible ideas come into the mind very distinct. So do tangible ideas. Hence extension seen & felt. Sounds, tastes, &c. are more blended.

250. *Qu.* Why not extension intromitted by the taste in conjunction with the smell—seeing tastes & smells are very distinct ideas?

251. Blew and yellow particles mixt, while they exhibit an uniform green, their extension is not perceiv'd; but as soon as they exhibit distinct sensations of blew and yellow, then their extension is perceiv'd.

252. Distinct perception of visible ideas not so perfect as of tangible—tangible ideas being many at once equally vivid. Hence heterogeneous extension.

253. Object. Why a mist encreases not the apparent magnitude of an object, in proportion to the faintness?

254. *Mem.* To enquire touching the squaring of the circle, &c.

255. That w^ch^ seems smooth & round to the touch may to sight seem quite otherwise. Hence no *necessary* connexion betwixt visible ideas and tangible ones.
256. In geometry it is not prov'd that an inch is divisible *ad infinitum.*
257. Geometry not conversant about our compleat determined ideas of figures, for these are not divisible *ad infinitum.*
258. Particular circles may be squar'd, for the circumference being given a diameter may be found betwixt w^ch^ & the true there is not any perceivable difference. Therefore there is no difference—extension being a perception; & a perception not perceiv'd is contradiction, nonsense, nothing. In vain to alledge the difference may be seen by magnifying-glasses, for in y^t^ case there is ('tis true) a difference perceiv'd, but not between the same ideas, but others much greater, entirely different therefrom.
259. Any visible circle possibly perceivable of any man may be squar'd, by the common way, most accurately; or even perceivable by any other being, see he never so acute, i.e. never so small an arch of a circle; this being w^t^ makes the distinction between acute & dull sight, and not the M. V., as men are perhaps apt to think.
260. The same is true of any tangible circle. Therefore further enquiry of accuracy in squaring or other curves is perfectly needless, & time thrown away.

261. *Mem.* To press w^t last precedes more homely, & so think on't again.

262. A meer line or distance is not make up of points, does not exist, cannot be imagin'd, or have an idea framed thereof,—no more than meer colour without extension.

263. *Mem.* A great difference between *considering* length w^thout breadth, & having an *idea* of, or *imagining*, length without breadth.

264. Malbranch out touching the xtallines diminishing, L. 1. c. 6.

265. 'Tis possible (& perhaps not very improbable, that is, is sometimes so) we may have the greatest pictures from the least objects. Therefore no necessary connexion betwixt visible & tangible ideas. These ideas, viz. great relation to *sphæra visualis*, or to the M.V. (w^ch is all that I would have meant by our having a greater picture) & faintness, might possibly have stood for or signify'd small tangible extensions. Certainly the greater relation to S. V. and M. V. does frequently, in that men view little objects near the eye.

266. Malbranch out in asserting we cannot possibly know whether there are 2 men in the world that see a thing of the same bigness. V. L. 1. c. 6.

267. Diagonal of particular square commensurable w^th its side, they both containing a certain number of M. V.

268. I do not think that surfaces consist of lines, i.e. meer distances. Hence perhaps may be solv'd that sophism w^ch would prove the oblique line equal to the perpendicular between 2 parallels.

269. Suppose an inch represent a mile. $\frac{1}{1000}$ of an inch

is nothing, but $\frac{1}{1000}$ of y^e^ mile represented is something: therefore $\frac{1}{1000}$ of an inch, tho' nothing, is not to be neglected, because it represents something, i.e. $\frac{1}{1000}$ of a mile.

270. Particular determin'd lines are not divisible *ad infinitum*, but lines as us'd by geometers are so, they not being determin'd to any particular finite number of points. Yet a geometer (he knows not why) will very readily say he can demonstrable an inch line is divisible *ad infinitum*.

271. A body moving in the optique axis not perceiv'd to move by sight merely, and without experience. There is ('tis true) a successive change of ideas,—it seems less and less. But, besides this, there is no visible change of place.

272. *Mem.* To enquire most diligently concerning the incommensurability of diagonale & side—whether it does not go on the supposition of units being divisible *ad infinitum*, i.e. of the extended thing spoken of being divisible *ad infinitum* (unit being nothing; also v. Barrow, Lect. Geom.), & so the infinite indivisibility deduced therefrom is a *petitio principii*?

273. The diagonal is commensurable with the side.

M. 274. From Malbranch, Locke, & my first arguings it
P. can't be prov'd that extension is not in matter. From Locke's arguings it can't be proved that colours are not in bodies.

275. *Mem.* That I was distrustful at 8 years old; and consequently by nature disposed for these new doctrines.

276. *Qu.* How can a line consisting of an unequal number of points be divisible [*ad infinitum*] in two equals?

277. *Mem.* To discuss copiously how & why we do not see the pictures.

M. P. 278. Allowing extensions to exist in matter, we cannot know even their proportions—contrary to Malbranch.

M. 279. I wonder how men cannot see a truth so obvious, as that extension cannot exist without a thinking substance.

M. 280. Species of all sensible things made by the mind. This prov'd either by turning men's eyes into magnifyers or diminishers.

281. Y^{r} M. V. is, suppose, less than mine. Let a 3^{d} person have perfect ideas of both our M. V. His idea of my M. V. contains his idea of yours, & somewhat more. Therefore 'tis made up of parts: therefore his idea of my V. M. is not perfect or just, which diverts the hypothesis.

282. *Qu.* Whether a M. V. or T. be extended?

283. *Mem.* The strange errours men run into about the pictures. We think them small because should a man be suppos'd to see them their pictures would take up but little room in the fund of his eye.

284. It seems all lines can't be bisected in 2 equall parts. *Mem.* To examine how the geometers prove the contrary.

285. 'Tis impossible there should be a M. V. less than mine. If there be, mine may become equal to it (because

they are homogeneous) by detraction of some part or parts. But it consists not of parts, ergo &c.

286. Suppose inverting perspectives bound to y^e^ eyes of a child, & continu'd to the years of manhood—when he looks up, or turns up his head, he shall behold w^t^ we call *under*. *Qu.* What would he think of *up* and *down*?

M. 287. I wonder not at my sagacity in discovering the obvious tho' amazing truth. I rather wonder at my stupid inadvertency in not finding it out before—'tis no witchcraft to see.

M. 288. Our simple ideas are so many simple thoughts or perceptions; & that a perception cannot exist without a thing to perceive it, or any longer than it is perceiv'd; a thought cannot be in an unthinking thing; one uniform simple thought can be like to nothing but another uniform simple thought. Complex thoughts or ideas are onely an assemblage of simple ideas, and can be the image of nothing, or like unto nothing, but another assemblage of simple ideas, &c.

289. The Cartesian opinion of light & colours &c. is orthodox enough even in their eyes who think the Scripture expression may favour the common opinion. Why may not mine also? But there is nothing in Scripture that can possibly be wrested to make against me, but, perhaps, many things for me.

M. 290. Bodies &c. do exist whether we think of 'em or no, they being taken in twofold sense—Collections of thoughts & Collections of powers to cause those

thoughts. These later exist; tho' perhaps *a parte rei* it may be one simple perfect power.

291. *Qu.* whether the extension of a plain, look'd at straight and slantingly, survey'd minutely & distinctly, or in the bulk and confusedly at once, be the same? *N. B.* The plain is suppos'd to keep the same distance.
292. The ideas we have by a successive, curious inspection of y^e^ minute parts of a plain do not seem to make up the extension of that plain view'd & consider'd all together.

293. Ignorance in some sort requisite in y^e^ person that should discover the Principle.
294. Thoughts do most properly signify, or are mostly taken for the interior operations of the mind, wherein the mind is active. Those y^t^ obey not the acts of volition, and in w^ch^ the mind is passive, are more properly call'd sensations or perceptions. But y^t^ is all a case.

295. Extension being the collection or distinct coexistence of minimums, i.e. of perceptions intromitted by sight or touch, it cannot be conceiv'd without a perceiving substance.
P. 296. Malbranch does not prove that the figures & extensions exist not w^n^ they are not perceiv'd. Consequently he does not prove, nor can it be prov'd on his principles, that the sorts are the work of the mind, and onely in the mind.
M. 297. The great argument to prove that extension can-
P. not be in an unthinking substance is, that it cannot be

conceiv'd distinct from or without all tangible or visible quality.

M. 298. Tho' matter be extended wth an indefinite extension, yet the mind makes the sorts. They were not before the mind perceiving them, & even now they are not without the mind. Houses, trees, &c., tho' indefinitely extended matter do exist, are not without the mind.

M. 299. The great danger of making extension exist without the mind, in that if it does it must be acknowleg'd infinite, immutable, eternal, &c.;—w^{ch} will be to make either God extended (w^{ch} I think dangerous), or an eternal, immutable, infinite, increate Being beside God.

I. 300. Finiteness of our minds no excuse for the geometers.

M. 301. The Principle easily proved by plenty of arguments *ad absurdum*.

302. The twofold signification of Bodies, viz. Combinations of thoughts & Combinations of powers to raise thoughts. These, I say, in conjunction with homogeneous particles, may solve much better the objections from the Creation than the supposition that Matter does exist. Upon w^{ch} supposition I think they cannot be solv'd.

303. Bodies taken for powers do exist w^{n} not perceiv'd; but this existence is not actual. W^{n} I say a power exists, no more is meant than that if in the light I open my eyes, and look that way, I shall see it, i.e. the body, &c.

304. *Qu.* whether blind before sight may not have an idea of light and colours & visible extension, after the same manner as we perceive them w^th^ eyes shut, or in the dark—not imagining, but seeing after a sort?

305. Visible extension cannot be conceiv'd added to tangible extension. Visible and tangible points can't make one sum. Therefore these extensions are heterogeneous.

306. A probable method propos'd whereby one may judge whether in near vision there is a greater distance between the xtalline & fund than usual, or whether the xtalline be onely render'd more convex. If the former, then the V. S. is enlarg'd, & the M. V. corresponds to less than 30″, or w^t^ever it us'd to correspond to.

307. Stated measures, inches, feet, &c., are tangible, not visible extensions.

M. 308. Locke, More, Raphson, &c. seem to make God extended. 'Tis nevertheless of great use to religion to take extension out of our idea of God, & put a power in its place. It seems dangerous to suppose extension, w^ch^ is manifestly inert, in God.

M. 309. But, say you, The thought or perception I call extension is not itself in an unthinking thing or Matter —but it is like something w^ch^ is in Matter. Well, say I, Do you apprehend or conceive w^t^ you say extension is like unto, or do you not? If the later, how know you they are alike? How can you compare any things besides your own ideas? If the former, it must be an idea, i.e. perception, thought, or sensation—w^ch^ to be in an unperceiving thing is a contradiction.

I. 310. I abstain from all flourish & powers of words & figures, using a great plainness & simplicity of simile, having oft found it difficult to understand those that use the lofty & Platonic, or subtil & scholastique strain.

M. 311. Whatsoever has any of our ideas in it must perceive; it being that very having, that passive recognition of ideas, that denominates the mind perceiving—that being the very essence of perception, or that wherein perception consists.

312. The faintness w^ch^ alters the appearance of the horizontal moon, rather proceeds from the quantity or grossness of the intermediate atmosphere, than from any change of distance, w^ch^ is perhaps not considerable enough to be a total cause, but may be a partial cause of the phenomenon. *N. B.* The visual angle is less in cause the horizon.

313. We judge of the distance of bodies, as by other things, so also by the situation of their pictures in the eye, or (w^ch^ is the same thing) according as they appear higher or lower. Those w^ch^ seem higher are further off &c.

314. *Qu.* why we see objects greater in y^e^ dark? whether this can be solv'd by any but my Principles?

M. 315. The reverse of y^e^ Principle introduced scepticism.

M. 316. *N. B.* On my Principles there is a reality: there are things: there is a *rerum natura*.

317. *Mem.* The surds, doubling the cube, &c.

318. We think that if just made to see we should judge of the distance & magnitude of things as we do now;

but this is false. So also w^{t} we think so positively of the situation of objects.

319. Hays's, Keill's, &c. method of proving the infinitesimals of the 3^{d} order absurd, & perfectly contradictions.

320. Angles of contact, & verily all angles comprehended by a right line & a curve, cannot be measur'd, the arches intercepted not being similar.

321. The danger of expounding the H. Trinity by extension.

M. P. 322. *Qu.* Why should the magnitude seen at a near distance be deem'd the true one rather than that seen at a farther distance? Why should the sun be thought many 1000 miles rather than one foot in diameter—both being equally apparent diameters? Certainly men judg'd of the sun not in himself, but wth relation to themselves.

M. 323. 4 Principles whereby to answer objections, viz.

1. Bodies do really exist, tho' not perceiv'd by us.
2. There is a law or course of nature.
3. Language & knowlege are all about ideas; words stand for nothing else.
4. Nothing can be a proof against one side of a contradiction that bears equally hard upon the other.

324. What shall I say? Dare I pronounce the admired ἀκρίβεια mathematica, that darling of the age, a trifle?

325. Most certainly no finite extension divisible *ad infinitum*.

M. 326. Difficulties about concentric circles.

N. 327. *Mem.* To examine & accurately discuss the scholium of the 8th definition of Mr. Newton's Principia.

328. Ridiculous in the mathematicians to despise Sense.

329. *Qu.* It is not impossible there should be abstract general ideas?

330. All ideas come from without. They are all particular. The mind, 'tis true, can consider one thing wthout another; but then, considered asunder, they make not 2 ideas. Both together can make but one, as for instance colour & visible extension.

331. The end of a mathematical line is nothing. Locke's argument that the end of his pen is black or white concludes nothing here.

332. *Mem.* Take care how you pretend to define extension, for fear of the geometers.

333. *Qu.* Why difficult to imagine a minimum? *Ans.* Because we are not used to take notice of 'em singly; they not being able singly to pleasure or hurt us, thereby to deserve our regard.

334. *Mem.* To prove against Keil yt the infinite divisibility of matter makes the half an equal number of equal parts with the whole.

335. *Mem.* To examine how far the not comprehending infinites may be admitted as a plea.

336. *Qu.* Why may not the mathematicians reject all the extensions below the M. as well as the dds, &c., wch are allowed to be something, & consequently may be magnify'd by glasses into inches, feet, &c., as well as the quantitys next below the M.?

337. Bigg, little, and number are the works of the mind. How therefore can ye extension you suppose in

Matter be big or little? How can it consist of any number of points?

P. 338. *Mem.* Strictly to remark L[ocke], b. 2. c. 8. s. 8.

339. Schoolmen compar'd with the mathematicians.

340. Extension is blended w^th^ tangible or visible ideas, & by the mind præscinded therefrom.

341. Mathematiques made easy—the scale does almost all. The scale can tell us the subtangent in y^e^ parabola is 2ble the abscisse.

342. W^t^ need of the utmost accuracy w^n^ the mathematicians own *in rerum natura* they cannot find anything corresponding w^th^ their nice ideas.

343. Newton in sad plight about his *cave intellexeris finitas.*

344. One should endeavour to find a progression by trying w^th^ the scale.

345. Newton's fluxions needless. Anything below a M might serve for Leibnitz's Differential Calculus.

346. How can they hang together so well, since there are in them (I mean the mathematiques) so many *contradictoriæ argutiæ.* V. Barrow, Lect.

347. A man may read a book of Conics with ease, knowing how to try if they are right. He may take 'em on the credit of the author.

348. Where's the need of certainty in such trifles? The thing that makes it so much esteem'd in them is that we are thought not capable of getting it elsewhere. But we may in ethiques and metaphysiques.

349. The not leading men into mistakes no argument for the truth of the infinitesimals. They being nothings may perhaps do neither good nor harm, except w^n^ they

are taken for something, & then the contradiction begets a contradiction.

350. a + 500 nothings = a + 50 nothings—an innocent silly truth.

M. 351. My doctrine excellently corresponds wth the Creation. I suppose no matter, no stars, sun, &c. to have existed before.

352. It seems all circles are not similar figures, there not being the same proportion betwixt all circumferences & their diameters.

353. When a small line upon paper represents a mile, the mathematicians do not calculate the $\frac{1}{10000}$ of the paper line, they calculate the $\frac{1}{10000}$ of the mile. 'Tis to this they have regard, 'tis of this they think; if they think or have any idea at all. The inch perhaps might represent to their imaginations the mile, but y^{e} $\frac{1}{10000}$ of the inch cannot be made to represent anything, it not being imaginable.

354. But the $\frac{1}{10000}$ of a mile being somewhat, they think the $\frac{1}{10000}$ of the inch is somewhat: w^{n} they think of y^{t} they imagine they think on this.

355. 3 faults occur in the arguments of the mathematicians for divisibility *ad infinitum*—

1. They suppose extension to exist without the mind, or not perceived.
2. They suppose that we have an idea of length without breadth, ‹Or rather that invisible length does exist› or that length without breadth does exist.
3. That unity is divisible *ad infinitum*.

356. To suppose a M. S. divisible is to say there are distinguishable ideas where there are no distinguishable ideas.

357. The M. S. is not near so inconceivable as the *signum in magnitudine individuum.*

358. *Mem.* To examine the math. about their *point*—what it is—something or nothing; and how it differs from the M. S.

359. All might be demonstrated by a new method of indivisibles, easier perhaps and juster than that of Cavallierius.

M.P. 360. Unperceivable perception a contradition.

361. Proprietates reales rerum omnium in Deo, tam
G. corporum quum spirituum continentur. Clerici Log. cap. 8.

362. Let my adversaries answer any one of mine, I'll yield. If I don't answer every one of theirs, I'll yield.

363. The loss of the excuse may hurt Transubstantiation, but not the Trinity.

364. ‹By 'the excuse' is meant the finiteness of our mind—making it possible for contradictions to appear true to us.›

365. We need not strain our imaginations to conceive such little things. Bigger may do as well for infinitesimals, since the integer must be an infinite.

366. Evident y^{t} w^{ch} has an infinite number of parts must be infinite.

367. *Qu.* Whether extension be resoluble into points it does not consist of?

368. Nor can it be objected that we reason about numbers, w^ch^ are only words & not ideas; for these infinitesimals are words of no use, if not supposed to stand for ideas.

369. *Axiom.* No reasoning about things whereof we have no idea. Therefore no reasoning about infinitesimals.

370. Much less infinitesimals of infinitesimals, &c.

371. *Axiom.* No word to be used without an idea.

S. 372. If uneasiness be necessary to set the will at work *Qu.* How shall we will in Heaven?

373. Malbranch's and Bayle's arguments do not seem to prove against space, but onely Bodies.

M. 374. Our eyes and senses inform us not of the existence
P. of matter or ideas existing without the mind. They are not to be blam'd for the mistake.

375. I defy any man to assign a right line equal to a parabololid, but that w^n^ look't at thro' a microscope they may appear unequall.

M. 376. Newton's harangue amounts to no more than that gravity is proportional to gravity.

377. One can't imagine an extended thing without colour. V. Barrow, L. G.

P. 378. Men allow colours, sounds, &c. not to exist without the mind, tho' they have no demonstration they do not. Why may they not allow my Principle with a demonstration?

M. 379. *Qu.* Whether I had not better allow colours to

P. exist without the mind; taking the mind for the active thing w^ch^ I call 'I', 'myself'—y^t^ seems to be distinct from the understanding?

P. 380. The taking extension to be distinct from all other tangible & visible qualities, & to make an idea by itself, has made men take it to be without the mind.

381. I see no wit in any of them but Newton. The rest are meer triflers, meer Nihilarians.

382. The folly of the mathematicians in not judging of sensations by their senses. Reason was given us for nobler uses.

M. 383. Keill's filling the world with a mite. This follows from the divisibility of extension *ad infinitum*.

384. Extension, or length without breadth, seems to be nothing save the number of points that lie betwixt any 2 points. It seems to consist in meer proportion—meer reference of the mind.

385. ⟨Extension without breadth—i.e. insensible, intangible length—is not conceivable. 'Tis a mistake we are led into by the doctrine of abstraction.⟩

386. To what purpose is it to determine the Focus's of glasses geometrically?

387. Sir Isaac owns his book could have been demonstrated on the supposition of indivisibles.

M. 388. Innumerable vessels if matter. V. Cheyne.

389. I'll not admire the mathematicians. 'Tis w^t^ any one of common sense might attain to by repeated acts. I prove it by experience. I am but one of common sense, and I &c.

390. Mathematicians have some of them good parts—

the more is the pity. Had they not been mathematicians they had been good for nothing. They were such fools they knew not how to employ their parts.

391. The mathematicians could not so much as tell wherein truth & certainty consisted, till Locke told them. I see the best of 'em talk of light and colours as if wthout the mind.

392. By *thing* I either mean ideas or that w^{ch} has ideas.

393. Nullum præclarum ingenium unquam fuit magnus mathematicus. Scaliger.

394. A great genius cannot stoop to such trifles & minutenesses as they consider.

M. 395. ‹An idea cannot exist unperceiv'd.›

396. *Qu.* If there be not two kinds of visible extension —one perceiv'd by a confus'd view, the other by a distinct successive direction of the optique axis to each point?

I. 397. No general ideas. The contrary a cause of mistake or confusion in mathematiques, &c. This to be intimated in y^{e} Introduction.

398. The Principle may be apply'd to the difficulties of Conservation, co-operation, &c.

N. 399. Trifling for the [natural] philosophers to enquire the cause of magnetical attractions, &c. They onely search after co-existing ideas.

M. 400. Quæcunque in Scriptura militant adversus Coper-
P. nicum, militant pro me.

M. 401. All things in the Scripture w^{ch} side with the
P. Vulgar against the Learned, side with me also. I side in all things with the mob.

M. 402. I know there is a mighty sect of Men will oppose me, but yet I may expect to be supported by those whose minds are not so far overgrown wth madness. These are far the greatest part of mankind—especially Moralists, Divines, Politicians; in a word, all but Mathematicians and Natural Philosophers. (I mean only the hypothetical gentlemen.) Experimental philosophers have nothing whereat to be offended in me.

403. Newton begs his Principles; I demonstrate mine.

M. 404. I must be very particular in explaining w^{t} is meant
E. by things existing—in houses, chambers, fields, caves, &c.—w^{n} not perceiv'd as well as w^{n} perceived; and shew how the vulgar notion agrees with mine, when we narrowly inspect into the meaning & definition of the word Existence w^{ch} is no simple idea, distinct from perceiving and being perceived.

405. The Schoolmen have noble subjects, but handle them ill. The Mathematicians have trifling subjects, but reason admirably about them. Certainly their method and arguing are excellent.

406. God knows how far our knowledge of Intellectual beings may be enlarg'd from the Principles.

M. 407. The Reverse of the Principle I take to have been the chief source of all that scepticism and folly, all those contradictions & inextricable puzling absurdities, that have in all ages been a reproach to Human Reason, as well as of that Idolatry, whether of Images or of Gold, that blinds the greatest part of the world, as well as of that shamefull immorality that turns us into Beasts.

E. 408. היה Vixit & fuit.

409. οὐσία, the name for substance, used by Aristotle, the Fathers, &c.

410. If at the same time we shall make the Mathematiques much more easie & much more accurate, w^{t} can be objected to us?

411. We need not force our Imagination to conceive such very small lines for infinitesimals. They may every whit as well be imagin'd big as little, since that the integer must be infinite.

412. Evident that w^{ch} has an infinite number of parts must be infinite.

413. We cannot imagine a line or space infinitely great —therefore absurd to talk or make propositions about it.

414. We cannot imagine a line, space, &c., quovis lato majus. Since y^{t} what we imagine must be datum aliquod; & a thing can't be greater than itself.

415. If you call infinite that w^{ch} is greater than any assignable by another, then I say, in that sence there may be an infinite square, sphere, or any other figure, w^{ch} is absurd.

416. *Qu.* if extension be resoluble into points it does not consist of?

417. No reasoning about things whereof we have no ideas; therefore no Reasoning about Infinitesimals.

418. No word to be used without an idea.

S. 419. If uneasiness be necessary to set the Will at work, *Qu.* How shall we will in heaven?

420. Bayle's, Malbranch's, &c. arguments do not seem to prove against Space, but onely against Bodies.

M. P. 421. I agree in nothing w^th^ the Cartesians as to y^e^ existence of Bodies & Qualities.

422. Aristotle as good a man as Euclid, but he was allow'd to have been mistaken.

423. Lines not proper for Demonstration.

M. 424. We see the Horse itself, the Church itself; it being an idea and nothing more. The Horse itself, the church itself, is an Idea, i.e. an object—immediate object—of thought.

425. Instead of injuring, our Doctrine much benefits Geometry.

E. 426. Existence is percipi, or percipere, [or velle, i.e. agere]. The horse is in the stable, the Books are in the study as before.

N. 427. In Physiques I have a vast view of things soluble hereby, but have not leisure.

N. 428. Hyps and such like unaccountable things confirm my Doctrine.

429. Angle not well defined. See Pardies' Geometry, by Harris, &c. This one ground of Trifling.

430. One idea not the cause of another—one power not the cause of another. The cause of all natural things is onely God. Hence trifling to enquire after second causes. This Doctrine gives a most suitable idea of the Divinity.

N. 431. Absurd to study astronomy & other the like Doctrines as speculative sciences.

N. 432. The absurd account of memory by the brain, &c. makes for me.

433. How was light created before man? Even so were Bodies created before man.

E. 434. Impossible any thing besides that w^ch^ thinks and is thought on should exist. [Making thought to be active.]

435. That w^ch^ is visible cannot be made up of invisible things.

436. M. S. is that wherein there are not contain'd distinguishable sensible parts. Now how can that w^ch^ hath not sensible parts be divided into sensible parts? If you say it may be divided into insensible parts, I say these are nothings.

437. Extension abstract from sensible qualities is no sensation, I grant; but then there is no such idea, as any one may try. There is onely a considering the number of points without the sort of them, & this makes more for me, since it must be in a considering thing.

438. *Mem.* Before I have shewn the distinction between visible & tangible extension, I must not mention them as distinct. I must not mention M. T. & M. V., but in general M. S., &c. [This belongs to Geometry.]

439. *Qu.* whether a M. V. be of any colour? a M. T. of any tangible quality?

440. If visible extension be the object of Geometry, 'tis that which is survey'd by the optique axis.

P. 441. I may say the pain is *in* my finger, &c., according to my Doctrine.

442. *Mem.* Nicely to discuss w^t^ is meant when we say a line consists of a certain number of inches or points, &c.; a circle of a certain number of square inches, points, &c. Certainly we may think of a circle, or have

its idea in our mind, without thinking of points or square inches, &c.; whence it should seem the idea of a circle is not made up of the ideas of points, square inches, &c.

443. *Qu.* Is any more than this meant by the foregoing expressions, viz. that squares or points may be perceived in or made out of a circle, &c., or that squares, points, &c. are actually in it, i.e. are perceivable in it?

444. A line in abstract, or Distance, is the number of points between two points. There is also distance between a slave & an Emperor, between a Peasant & Philosopher, between a drachm & a pound, a farthing & a crown, &c.; in all which Distance signifies the number of intermediate ideas.

445. Halley's Doctrine about the Proportion between Infinitely great quantities vanishes. When men speak of Infinite quantities, either they mean finite quantities, or else talk of [that whereof they have] no idea; both which are absurd.

446. ⟨That need not have been blotted out—'tis good sense, if we do but determine w^{t} we mean by *thing* and *idea*.⟩

447. If the Disputations of the Schoolmen are blam'd for intricacy, triflingness, & confusion, yet it must be acknowledg'd that in the main they treated of great & important subjects. If we admire the method & acuteness of the Math[ematicians]—the length, the subtilty, the exactness of their Demonstrations—we must nevertheless be forced to grant that they are for the most part about trifling subjects, and perhaps mean nothing at all.

448. Motion on 2d thoughts seems to be a simple idea.

P. 449. [Motion distinct from y^e^ thing moved is not conceivable.]

N. 450. *Mem.* To take notice of Newton for Defining it [motion]; also of Locke's wisdom in leaving it undefin'd.

451. Ut ordo partium temporis est immutabilis, sin etiam ordo partium spatii. Moveantur hæ de locis suis, et movebuntur (ut ita dicam) de seipsis. Truly number is immensurable. That we will allow with Newton.

P. 452. Ask a Cartesian whether he is wont to imagine his globules without colour. Pellucidness is a colour. The colour of ordinary light of the sun is white. Newton in the right in assigning colours to the rays of light.

453. A man born blind would not imagine Space as we do. We give it always some dilute, or duskish, or dark colour—in short, we imagine it as visible, or intromitted by the eye, w^ch^ he would not do.

N. 454. Proinde vim inferunt sacris literis qui voces hasce (v. tempus, spatium, motus) de quantitatibus mensuratis ibi interpretantur. Newton, p. 10.

N. 455. I differ from Newton, in that I think the recession ab axe motus is not the effect, or index, or measure of motion, but of the vis impressa. It sheweth not w^t^ is truly moved, but w^t^ has the force impressed on it, or rather that w^ch^ hath an impressed force.

456. D & P are not proportional in all circles. dd is to $\frac{1}{4}dp$ as d to $\frac{p}{4}$; but d & $\frac{p}{4}$ are not in the same proportion in all circles. Hence 'tis nonsense to seek the terms of one general proportion whereby to rectify all peripheries, or of another whereby to square all circles.

457. *N. B.* If the Circle be Squared Arithmetically, 'tis squared Geometrically, Arithmetic or numbers being nothing but lines & proportions of lines when apply'd to Geometry.

458. *Mem.* To remark Cheyne & his Doctrine of infinites.

459. Extension, motion, time, do each of them include the idea of succession, & so far forth they seem to be of mathematical consideration. Number consisting in succession & distinct perception, w^ch^ also consists in succession; for things at once perceiv'd are jumbled & mixt together in the mind. Time and motion cannot be conceiv'd without succession; and extension, qua mathemat., cannot be conceiv'd but as consisting of parts w^ch^ may be distinctly & successively perceiv'd. Extension perceived at once & *in confuso* does not belong to math.

460. The simple idea call'd Power seems obscure, or rather none at all, but onely the relation 'twixt Cause and Effect. W^n^ I ask whether A can move B, if A be an intelligent thing, I mean no more than whether the volition of A that B move be attended with the motion of B? If A be senseless, whether the impulse of A against B be followed by y^e^ motion of B?

461. Barrow's arguing indivisibles, lect. i, p. 16, is a petitio principii, for the Demonstration of Archimedes supposeth the circumference to consist of more than 24 points. Moreover it may perhaps be necessary to suppose the divisibility *ad infinitum*, in order to Demonstrate that the radius is equal to the side of the Hexagon.

462. Shew me an argument against indivisibles that does not go on some false supposition.

463. A great number of insensibles—or thus, two Invisibles, say you, put together become visible; therefore that M. V. contains or is made up of Invisibles. I answer, the M. V. does not comprise, is not composed of, Invisibles. All the matter amounts to this, viz. whereas I had no idea awhile agoe, I have an idea now. It remains for you to prove that I came by the present idea because there were two invisibles added together. I say the invisibles are nothings, cannot exist, include a contradiction.

464. I am young, I am an upstart, I am a pretender, I am vain. Very well. I shall endeavour patiently to bear up under the most lessening, vilifying appellations the pride & rage of man can devise. But one thing I know I am not guilty of. I do not pin my faith on the sleeve of any great man. I act not out of prejudice or prepossession. I do not adhere to any opinion because it is an old one, a reviv'd one, a fashionable one, or one that I have spent much time in the study and cultivation of.

465. Sense rather than Reason or demonstration ought to be employed about lines and figures, these being things sensible; for as for those you call insensible, we have proved them to be nonsense, nothing.

I. 466. If in some things I differ from a Philosopher I profess to admire, 'tis for that very thing on account whereof I admire him, namely, the love of truth. This &c.

I. 467. Whenever my reader finds me talk very positively, I desire he'd not take it ill. I see no reason why certainty should be confined to the mathematicians.

468. I say there are no incommensurables, no surds. I say the side of any square may be assign'd in numbers. Say you assign unto me the side of the square 10. I ask w^t 10—10 feet, inches, &c., or 10 points? If the later, I deny there is any such square, 'tis impossible 10 points should compose a square. If the former, resolve y^r 10 square inches, feet, &c. into points, & the number of points must necessarily be a square number whose side is easily assignable.

469. A mean proportional cannot be found betwixt any two given lines. It can onely be found betwixt those the numbers of whose points multiply'd together produce a square number. Thus betwixt a line of 2 inches & a line of 5 inches a mean geometrical cannot be found, except the number of points contained in 2 inches multiply'd by y^e number of points contained in 5 inches make a square number.

470. If the wit and industry of the Nihilarians were employ'd about the usefull & practical mathematiques, w^t advantage had it brought to mankind!

M. 471. You ask me whether the books are in the study
E. now, when no one is there to see them? I answer, Yes. You ask me, are we not in the wrong for imagining things to exist w^n they are not actually perceiv'd by the senses? I answer, No. The existence of our ideas consists in being perceiv'd, imagin'd, thought on. Whenever they are imagin'd or thought on they do exist. Whenever they are mentioned or discuss'd of they

are imagin'd & thought on. Therefore you can at no time ask me whether they exist or no, but by reason of y^t^ very question they must necessarily exist.

E. 472. But, say you, then a Chimæra does exist? I answer, it doth in one sense, i.e. it is imagin'd. But it must be well noted that existence is vulgarly restrain'd to actuall perception, & that I use the word existence in a larger sense than ordinary.

473. *N.B.*—According to my Doctrine all things are *entia rationis*, i.e. solum habent esse in intellectum.

E. 474. ‹According to my Doctrine all are not *entia rationis*. The distinction between *ens rationis* and *ens reale* is kept up by it as well as any other doctrine.›

475. You ask me whether there can be an infinite Idea? I answer, in one sense there may. Thus the visual sphere, tho' ever so small, is infinite, i.e. has no end. But if by infinite you mean an extension consisting of innumerable points, then I ask y^r^ pardon. Points, tho' never so many, may be number'd. The multitude of points, or feet, inches, &c., hinders not their numbrableness (i.e. hinders not their being nameable) in the least. Many or most are numerable, as well as few or least. Also, if by infinite idea you mean an *idea* too great to be comprehended or perceiv'd all at once, you must excuse me. I think such an infinite is no less than a contradiction.

M. 476. The sillyness of the current doctrine makes much for me. They commonly suppose a material world—figures, motions, bulks of various sizes, &c.—according to their own confession to no purpose. All our sensations may be, & sometimes actually are, without them;

nor can men so much as conceive it possible they should concur in any wise to the production of them.

M. 477. Ask a man, I mean a Cartesian, why he supposes this vast structure, this compages of Bodies? he shall be at a stand; he'll not have one word to say. W^ch^ sufficiently shews the folly of the hypothesis.

M. 478. ⟨Or rather why he supposes all y^s^ Matter? For bodies and their qualities I do allow to exist independently of *our* mind.⟩

S. 479. *Qu.* How is the soul distinguish'd from its ideas? Certainly if there were no sensible ideas there could be no soul, no perception, remembrance, love, fear, &c.; no faculty could be exerted.

S. 480. ⟨The soul is the Will, properly speaking, and as it is distinct from ideas.⟩

S. 481. The grand puzling question, whether I sleep or wake, easily solv'd.

482. *Qu.* Whether minima or meer minima may not be compar'd by their sooner & later evanescence, as well as by more or less points, so that one sensible may be greater than another, tho' it exceeds it not by one point?

483. Circles on several radius's are not similar figures, they having neither all nor any an infinite number of sides. Hence in vain to enquire after 2 terms of one and y^e^ same proportion that should constantly express the reason of the *d* to the *p* in all circles.

484. *Mem.* To remark Wallis's harangue, that the aforesaid proportion can neither be expressed by rational numbers nor surds.

485. We can no more have an idea of length without breadth or visibility, than of a general figure.

486. One idea may be like another idea, tho' they contain no common simple idea. [This I do not altogether approve of.] Thus the simple idea red is in some sense like the simple idea blue; 'tis liker it than sweet or shrill. But then those ideas w^{ch} are so said to be alike, agree both in their connexion with another simple idea, viz. extension, & in their being receiv'd by one & the same sense. But, after all, nothing can be like an idea but an idea.

487. No sharing betwixt God & Nature or second causes in my Doctrine.

M. 488. Materialists must allow the earth to be actually mov'd by the attractive power of every stone that falls from the air, with many other the like absurditys.

489. Enquire concerning the pendulum clock, &c.; whether those inventions of Huygens, &c. may be attained to by my doctrine.

490. The '''' & ''''' & '''''' &c. of time are to be cast away and neglected, as so many noughts or nothings.

491. *Mem.* To make experiments concerning minimums and their colours, whether they have any or no, & whether they can be of that green w^{ch} seems to be compounded of yellow and blue.

S. 492. *Qu.* Whether it were not better *not* to call the operations of the mind ideas—confining this term to things sensible?

E. 493. *Mem.* Diligently to set forth how that many of

the Ancient Philosophers run into so great absurditys as even to deny the existence of motion, and those other things they perceiv'd actually by their senses. This sprung from their not knowing w^{t} existence was, and wherein it consisted. This the source of all their Folly. 'Tis on the discovering of the nature & meaning & import of Existence that I chiefly insist. This puts a wide difference betwixt the sceptics &c. & me. This I think wholly new. I am sure 'tis new to me.

494. We have learn'd from Mr. Locke that there may be, and that there are, several glib, coherent, methodical discourses, w^{ch} nevertheless amount to just nothing. This by him intended with relation to the Scholemen. We may apply it to the Mathematicians.

495. Power no simple Idea. It means nothing but the Relation between cause & effect.

496. *Qu.* How can all words be said to stand for ideas? The word Blue stands for a colour without any extension, or abstract from extension. But we have not an idea of colour without extension. We cannot imagine colour without extension.

497. Locke seems wrongly to assign a double use of words: one for communicating & the other for the recording our thoughts. 'Tis absurd to use words for recording our thoughts to ourselves, or in our private meditations.

498. No one abstract simple idea like another. Two simple ideas may be connected with one & the same 3^{d} simple idea, or be intromitted by one & the same sense. But consider'd in themselves they can have nothing common, and consequently no likeness.

499. *Qu.* How can there be any abstract ideas of colours? It seems not so easily as of tastes or sounds. But then all abstract ideas whatsoever are particular. I can by no means conceive an abstract general idea. 'Tis one thing to abstract one concrete idea from another of a different kind, & another thing to abstract an idea from all particulars of the same kind.

N. 500. *Mem.* Much to Recommend and approve of Experimental Philosophy.

S. 501. What means Cause as distinguish'd from Occasion? Nothing but a being w^{ch} wills, w^{n} the effect follows the volition. Those things that happen from without we are not the cause of. Therefore there is some other Cause of them, i.e. there is a Being that wills these perceptions in us.

S. 502. ⟨It should be said, nothing but a Will—a Being which wills being unintelligible.⟩

503. One square cannot be double of another. Hence the Pythagoric Theorem is false.

504. Some writers of Catoptrics absurd enough to place the apparent place of the object in the Barrovian case behind the eye.

505. Blew and yellow chequers still diminishing terminate in green. This may help to prove the composition of green.

506. There is in green 2 foundations of 2 relations of likeness to blew & yellow. Therefore green is compounded.

507. A mixt cause will produce a mixt effect. Therefore colours are all compounded that we see.

508. *Mem.* To consider Newton's two sorts of green.

509. *N. B.* My abstract & general doctrines ought not to be condemn'd by the Royall Society. 'Tis w^t^ their meeting did ultimately intend. V. Sprat's History S. R.

I. 510. *Mem.* To Premise a Definition of Idea.

Mo. 511. The 2 great Principles of Morality—the Being of a God & the Freedom of Man. Those to be handled in the beginning of the Second Book.

512. Subvertitur geometria ut non practica sed speculativa.

513. Archimedes's proposition about squaring the circle has nothing to do with circumferences containing less than 96 points; & if the circumference contain 96 points it may be apply'd, but nothing will follow against indivisibles. V. Barrow.

514. Those curve lines that you can Rectify Geometrically. Compare them with their equal lines & by a microscope you shall discover an inequality. Hence my squaring of the circle as good and exact as the best.

M. 515. *Qu.* whether the substance of Body or anything else be any more than the collection of ideas included in that thing? Thus the substance of any particular Body is extension, solidity, figure. Of general no idea.

I. 516. *Mem.* Most carefully to inculcate and set forth that the endeavouring to express abstract philosophic thoughts by words unavoidably runs a man into difficulties. This to be done in the Introduction.

517. *Mem.* To endeavour most accurately to understand what is meant by this axiom: Quæ sibi mutuo congruunt æqualia sunt.

518. *Qu.* wt the Geometers mean by equality of lines, & whether, according to their definition of equality, a curve line can possibly be equal to a right line?

519. If wth me you call those lines equal wch contain an equal number of points, then there will be no difficulty. That curve is equal to a right line wch contains the same points as the right one doth.

M. 520. I take not away substances. I ought not to be accused of discarding substance out of the reasonable world. I onely reject the philosophic sense (wch in effect is no sense) of the word substance. Ask a man not tainted with their jargon wt he means by corporeal substance, or the substance of body. He shall answer, bulk, solidity, and such like sensible qualitys. These I retain. The philosophic nec quid, nec quantum, nec quale, whereof I have no idea, I discard; if a man may be said to discard that wch never had any being, was never so much as imagin'd or conceiv'd.

521. ⟨*N. B.* I am more for reality than any other philosophers. They make a thousand doubts, & know not certainly but we may be deceiv'd. I assert the direct contrary.⟩

M. 522. In short, be not angry. You lose nothing, whether real or chimerical. Wtever you can in any wise conceive or imagine, be it never so wild, so extravagant, & absurd, much good may it do you. You may enjoy it for me. I'll never deprive you of it.

523. A line in the sense of mathematicians is not meer distance. This evident in that there are curve lines.

524. Curves perfectly incomprehensible, inexplicable, absurd, except we allow points.

I. 525. If men look for a thing where it's not to be found, be they never so sagacious, it is lost labour. If a simple clumsy man knows where the game lies, He tho' a fool shall catch it sooner than the most fleet & dexterous that seek it elsewhere. Men choose to hunt for truth and knowledge anywhere rather than in their own understanding, where 'tis to be found.

M. 526. All knowledge onely about ideas. V. Locke, B. 4. c. 1.

S. 527. It seems improper, & liable to difficulties, to make the word Person stand for an Idea, or to make ourselves Ideas, or thinking things ideas.

I. 528. General ideas cause of much trifling and mistake.

529. Mathematicians seem not to speak clearly and coherently of equality. They nowhere define w^t they mean by that word when apply'd to lines.

530. Locke says the modes of simple Ideas, besides extension and number, are counted by degrees. I deny there are any modes or degrees of simple ideas. W^t he terms such are complex Ideas, as I have proved in Green.

531. W^t do the Mathematicians mean by considering curves as polygons? Either they are polygons or they are not. If they are, why do they give them the name of curves? Why do not they constantly call them polygons, & treat them as such? If they are not polygons, I think it absurd to use polygons in their stead. W^t is

this but to pervert language? to adapt an idea to a name that belongs not to it but to a different idea?

532. The Mathematicians should look to their axiom, Quæ congruunt sunt æqualia. I know not what they mean by bidding me put one triangle on another. The under triangle is no triangle—nothing at all, it not being perceiv'd. I ask, must sight be judge of this congruentia or not? If it must, then all lines seen under the same angle are equal, w^ch^ they will not acknowledge. Must the touch be judge? But we cannot touch or feel lines and surfaces, such as triangles, &c., according to the Mathematicians themselves. Much less can we feel a line or triangle that's cover'd by another line or triangle.

533. Do you mean by saying one triangle is equall to another, that they both take up equal spaces? But then the question recurs, what mean you by equal spaces? If you mean *spatia congruentia*, answer the above difficulty truly.

534. I can mean (for my part) nothing else by equal triangles than triangles containing equal numbers of points.

535. ⟨I can mean nothing by equal lines but lines w^ch^ 'tis indifferent whether of them I take, lines in w^ch^ I observe by my senses no difference, & w^ch^ therefore have the same name.⟩

536. Must the imagination be judge in the aforementioned case? but then imagination cannot go beyond the touch and sight. Say you, pure intellect must be judge. I reply that lines and triangles are not operations of the mind.

537. If I speak positively and with the air of a mathematician in things of which I am certain, 'tis to avoid disputes, to make men careful to think before they censure, to discuss my arguments before they go to refute them. I would by no means injure truth and certainty by an affected modesty & submission to better judgments. W^t^ I lay before you are undoubted theorems; not plausible conjectures of my own, nor learned opinions of other men. I pretend not to prove them by figures, analogy, or authority. Let them stand or fall by their own evidence.

N. 538. When you speak of the corpuscularian essences of bodys, *Mem.* to reflect on sect. 11. & 12. b. 4. c. 3. Locke. Motion supposes not solidity. A meer colour'd extension may give us the idea of motion.

P. 539. Any subject can have of each sort of primary qualities but one particular at once. Lib. 4. c. 3. s. 15. Locke.

M. 540. Well, say you, according to this new doctrine, all is but meer idea—there is nothing w^ch^ is not an *ens rationis*. I answer, things are as real, and exist *in rerum natura*, as much as ever. The distinction betwixt *entia realia* & *entia rationis* may be made as properly now as ever. Do but think before you speak. Endeavour rightly to comprehend my meaning, and you'll agree with me in this.

N. 541. Fruitless the Distinction 'twixt real and nominal essences.

542. We are not acquainted with the meaning of our

words. Real, extension, existence, power, matter, lines, infinite, point, and many more are frequently in our mouths, when little, clear, and determin'd answers them in our understandings. This must be well inculcated.

M. 543. Vain is the Distinction 'twixt Intellectual and Material world. V. Locke, lib. 4. c. 3. s. 27, where he says that is far more beautiful than this.

S. 544. Foolish in men to despise the senses. If it were Mo. not for them the mind could have no knowledge, no thought at all. All * * * of introversion, meditation, contemplation, and spiritual acts, as if these could be exerted before we had ideas from without by the senses, are manifestly absurd. This may be of great use in that it makes the happyness of the life to come more conceivable and agreeable to our present nature. The schoolemen & refiners in philosophy gave the greatest part of mankind no more tempting idea of heaven or the joys of the blest.

545. The vast, wide-spread, universal cause of our mistakes is, that we do not consider our own notions. I mean consider them in themselves—fix, settle, and determine them,—we regarding them with relation to each other only. In short, we are much out in study[ing] the relations of things before we study them absolutely and in themselves. Thus we study to find out the relations of figures to one another, the relations also of number, without endeavouring rightly to understand the nature of extension and number in themselves. This we think is of no concern, of no difficulty; but if I mistake not 'tis of the last importance.

Mo. 546. I allow not of the distinction there is made 'twixt profit and pleasure.

Mo. 547. I'd never blame a man for acting upon interest. He's a fool that acts on any other principles. The not considering these things has been of ill consequence in morality.

548. My positive assertions are no less modest than those that are introduced with 'It seems to me', 'I suppose', &c.; since I declare, once for all, that all I write or think is entirely about things as they appear to me. It concerns no man else any further than his thoughts agree with mine. This in the Preface.

I. 549. Two things are apt to confound men in their reasonings one with another. 1st. Words signifying the operations of the mind are taken from sensible ideas. 2ndly. Words as used by the vulgar are taken in some latitude, their signification is confused. Hence if a man use y^m in a determin'd, settled signification, he is at a hazard either of not being understood, or of speaking improperly. All this remedyed by studying the understanding.

550. Unite no simple idea. I have no idea meerly answering the word one. All number consists in relations.

551. Entia realia & entia rationis, a foolish distinction of the Schoolemen.

M. 552. We have no intuitive knowledge of the existence of other things besides ourselves & even præcedaneous to the knowledge of our own existence—in that we must have ideas or else we cannot think.

S. 553. We move our legs ourselves. 'Tis we that will their movement. Herein I differ from Malbranch.

Mo. 554. *Mem.* Nicely to discuss Lib. 4. c. 4. Locke ‹it is of y^e^ Reality of Knowledge›.

M. 555. *Mem.* Again and again to mention & illustrate the Doctrine of the Reality of Things, Rerum Natura, &c.

M. 556. W^t^ I say is demonstration—perfect demonstration. Wherever men have fix'd & determin'd ideas annex'd to their words they can hardly be mistaken. Stick but to my definition of likeness, and 'tis a demonstration y^t^ colours are not simple ideas, all reds being like, &c. So also in other things. This to be heartily insisted on.

E. 557. The abstract idea of Being or Existence is never thought of by the vulgar. They never use those words standing for abstract ideas.

M. 558. I must not say the words thing, substance, &c. have been the cause of mistakes, but the not reflecting on their meaning. I will be still for retaining the words. I only desire that men would think before they speak, and settle the meaning of their words.

Mo. 559. I approve not of that which Locke says, viz. truth consists in the joyning & separating of signs.

I. 560. Locke cannot explain general truth or knowledge without treating of words and propositions. This makes for me against abstract general ideas. V. Locke, lib. 4. ch. 6.

I. 561. Men have been very industrious in travelling forward. They have gone a great way. But none have gone backward beyond the Principles. On that side there lies much terra incognita to be travel'd over and discovered by me. A vast field for invention.

562. Twelve inches not the same idea with a foot. Because a man may perfectly conceive a foot who never thought of an inch.

563. A foot is equal to or the same with twelve inches in this respect, viz. the[y] contain both the same number of points.

564. [Forasmuch as] to be used.

565. *Mem.* To mention somewhat w^{ch} may encourage the study of politiques, and testify of me y^{t} I am well dispos'd toward them.

I. 566. If men did not use words for ideas they would never have thought of these. Certainly genera and species are not abstract general ideas. Abstract ideas include a contradiction in their nature. V. Locke, lib. 4. s. 9. c. 7.

567. A various or mixt cause must necessarily produce a various or mixt effect. This demonstrable from the definition of a cause; w^{ch} way of demonstrating must be frequently made use of in my Treatise, & to that end definitions often præmis'd. Hence 'tis evident that, according to Newton's doctrine, colours cannot be simple ideas.

M. 568. I am the farthest from scepticism of any man. I know with an intuitive knowledge the existence of other things as well as my own soul. This is w^{t} Locke nor scarce any other thinking philosopher will pretend to.

I. 569. Doctrine of abstraction of very evil consequence in all the sciences. *Mem.* Barrow's remark. Entirely owing to language.

570. Locke greatly out in reckoning the recording our ideas by words amongst the uses and not the abuses of language.

I. 571. Of great use & ye last importance to contemplate a man put into the world alone, with admirable abilitys, and see how after long experience he would know wthout words. Such a one would never think of genera and species or abstract general ideas.

I. 572. Wonderful in Locke that he could, wn advanced in years, see at all thro' a mist; it had been so long a gathering, & was consequently thick. This more to be admir'd than yt he did not see farther.

573. Identity of ideas may be taken in a double sense, either as including or excluding identity of circumstances, such as time, place, &c.

Mo. 574. I am glad the people I converse with are not all richer, wiser, &c. than I. This is agreeable to reason; is no sin. 'Tis certain that if the happyness of my acquaintance encreases, & mine not proportionably, mine must decrease. The not understanding this & the doctrine about relative good, discuss'd with French, Madden, &c., to be noted as 2 causes of mistake in judging of moral matters.

575. *Mem.* To observe (wn you talk of the division of ideas into simple and complex) that there may be another cause of the undefinableness of certain ideas besides that which Locke gives; viz. the want of names.

M. 576. *Mem.* To begin the 1st Book not with mention of sensation and reflection, but instead of sensation to use perception or thought in general.

S. 577. I defy any man to imagine or conceive perception without an idea, or an idea without perception.

E. 578. Locke's very supposition that matter & motion should exist before thought is absurd—includes a manifest contradiction.

579. Locke's harangue about coherent, methodical discourses amounting to nothing, apply'd to the mathematicians.

580. They talk of determining all the points of a curve by an equation. W^t^ mean they by this? W^t^ would they signify by the word points? Do they stick to the definition of Euclid?

S. 581. We think we know not the Soul, because we have no imaginable or sensible idea annex'd to that sound. This the effect of prejudice.

S. 582. ⟨Certainly we do not know it. This will be plain if we examine what we mean by the word knowledge. Neither doth this argue any defect in our knowledge, no more than our not knowing a contradiction.⟩

583. The very existence of ideas constitutes the Soul.

S. 584. Consciousness, perception, existence of ideas, seem to be all one.

585. Consult, ransack y^r^ understanding. W^t^ find you there besides several perceptions or thoughts? W^t^ mean you by the word mind? You must mean something that you perceive, or y^t^ you do not perceive. A thing not perceived is a contradiction. To mean (also) a thing you do not perceive is a contradiction. We are in all this matter strangely abused by words.

586. Mind is a congeries of perceptions. Take away

perceptions and you take away the mind. Put the perceptions and you put the mind.

587. Say you, the mind is not the perception, not that thing which perceives. I answer, you are abused by the words that & thing. These are vague and empty words with us.

S. 588. The having ideas is not the same thing with perception. A man may have ideas when he only imagines. But then this imagination presupposeth perception.

M. 589. That w^ch^ extreamly strengthens us in prejudice is y^t^ we think we see an empty space, which I shall demonstrate to be false in the 3^d^ Book.

590. There may be demonstrations used even in Divinity. I mean in reveal'd Theology, as contradistinguish'd from natural; for tho' the principles may be founded in Faith, yet this hinders not but that legitimate demonstrations might be built thereon; provided still that we define the words we use, and never go beyond our ideas. Hence 'twere no very hard matter for those who hold Episcopacy or Monarchy to be establish'd *jure Divino* to demonstrate their doctrines if they are true. But to pretend to demonstrate or reason anything about the Trinity is absurd. Here an implicit faith becomes us.

S. 591. *Qu.* if there be any real difference betwixt certain ideas of reflection & others of sensation, e.g. betwixt perception and white, black, sweet, &c.? Wherein, I pray you, does the perception of white differ from white men * * *

592. I shall demonstrate all my doctrines. The nature

of demonstration to be set forth and insisted on in the Introduction. In that I must needs differ from Locke, forasmuch as he makes all demonstration to be about abstract ideas, w^ch^ I say we have not nor can have.

S. 593. The understanding seemeth not to differ from its perceptions or ideas. *Qu.* W^t^ must one think of the will and passions?

E. 594. A good proof that Existence is nothing without or distinct from perception, may be drawn from considering a man put into the world without company.

E. 595. There was a smell, i.e. there was a smell perceiv'd. Thus we see that common speech confirms my doctrine.

T. 596. No broken intervals of death or annihilation. Those intervals are nothing; each person's time being measured to him by his own ideas.

I. 597. We are frequently puzzl'd and at a loss in obtaining clear and determin'd meanings of words commonly in use, & that because we imagine words stand for abstract general ideas which are altogether inconceivable.

I. 598. 'A stone is a stone.' This a nonsensical proposition, and such as the solitary man would never think on. Nor do I believe he would ever think on this: viz. 'The whole is equal to its parts', &c.

E. 599. Let it not be said that I take away Existence. I onely declare the meaning of the word, so far as I can comprehend it.

I. 600. If you take away abstraction, how do men differ from beasts? I answer, by shape, by language. Rather by degrees of more and less.

601. W^t^ means Locke by inferences in words, conse-

quences of words, as something different from consequences of ideas? I conceive no such thing.

I. 602. *N. B.* Much complaint about the imperfection of language.

M. 603. But perhaps some man may say, an inert thoughtless Substance may exist, tho' not extended, moved, &c., but with other properties whereof we have no idea. But even this I shall demonstrate to be impossible, w^n^ I come to treat more particularly of Existence.

604. Will not rightly distinguish'd from Desire by Locke—it seeming to superadd nothing to the idea of an action, but the uneasiness for its absence or non-existence.

S. 605. *Mem.* To enquire diligently into that strange mistery, viz. How it is that I can cast about, think of this or that man, place, action, w^n^ nothing appears to introduce them into my thoughts, w^n^ they have no perceivable connexion with the ideas suggested by my senses at the present?

I. 606. 'Tis not to be imagin'd w^t^ a marvellous emptiness & scarcity of ideas that man shall descry who will lay aside all use of words in his meditations.

M. 607. Incongruous in Locke to fancy we want a sense proper to see substances with.

I. 608. Locke owns that abstract ideas were made in order to naming.

M. 609. The common errour of the opticians, that we judge of distance by angles, strengthens men in their prejudice that they see things without and distant from their mind.

E. 610. I am persuaded, would men but examine w^t^ they mean by the word existence, they wou'd agree with me.
611. c. 20. s. 8. b. 4. of Locke makes for me against the mathematicians.

M. 612. The supposition that things are distinct from ideas takes away all real truth, & consequently brings in a universal scepticism; since all our knowledge and contemplation is confin'd barely to our own ideas.

I. 613. *Qu.* whether the solitary man would not find it necessary to make use of words to record his ideas, if not in memory or meditation, yet at least in writing—without which he could scarce retain his knowledge.
614. We read in history there was a time when fears and jealousies, privileges of parliament, malignant party, and such like expressions of too unlimited and doubtful a meaning, were words of much sway. Also the words Church, Whig, Tory, &c., contribute very much to faction and dispute.

S. 615. The distinguishing betwixt an idea and perception of the idea has been one great cause of imagining material substances.

S. 616. That God and Blessed Spirits have Will is a manifest argument against Locke's proofs that the Will cannot be conceiv'd, put into action, without a previous uneasiness.

S. 617. The act of the Will, or volition, is not uneasiness, for that uneasiness may be without volition.

S. 618. Volition is distinct from the object or idea for the same reason.

S. 619. Also from uneasiness and idea together.

620. The understanding not distinct from particular perceptions or ideas.

621. The Will not distinct from particular volitions.

S. 622. ⟨It is not so very evident that an idea, or at least uneasiness, may be without all volition or act.⟩

623. ⟨The understanding taken for a faculty is not really distinct from y^e^ will.⟩

624. ⟨This allow'd hereafter.⟩

S. 625. To ask whether a man can will either side is an absurd question, for the word *can* presupposes volition.

N. 626. Anima mundi, substantial form, omniscient radical heat, plastic vertue, Hylaschic principle—all these vanish.

M. 627. Newton proves that gravity is proportional to gravity. I think that's all.

628. *Qu.* whether it be the vis inertiæ that makes it difficult to move a stone, or the vis attractivæ, or both, or neither?

629. *Mem.* To express the doctrines as fully and copiously and clearly as may be. Also to be full and particular in answering objections.

S. 630. To say y^e^ Will is a power. Volition is an act. This is idem per idem.

631. W^t^ makes men despise extension, motion, &c., & separate them from the essence of the soul, is that they imagine them to be distinct from thought, and to exist in unthinking substance.

632. An extended may have passive modes of thinking good actions.

633. There might be idea, there might be uneasiness, there might be the greatest uneasiness wthout any volition, therefore the. . . .

M. 634. Matter once allow'd, I defy any man to prove that God is not Matter.

S. 635. Man is free. There is no difficulty in this proposition, if we but settle the signification of the word *free*— if we had an idea annext to the word free, and would but contemplate that idea.

S. 636. We are imposed on by the words will, determine, agent, free, can, &c.

S. 637. Uneasiness precedes not every volition. This evident by experience.

S. 638. Trace an infant in the womb. Mark the train & succession of its ideas. Observe how volition comes into the mind. This may perhaps acquaint you with its nature.

S. 639. Complacency seems rather to determine, or precede, or coincide wth & constitute the essence of volition, than uneasiness.

S. 640. You tell me, according to my doctrine a man is not free I answer, tell me w^{t} you mean by the word free, and I shall resolve you.

N. 641. *Qu.* W^{t} do men mean when they talk of one body's touching another? I say you never saw one body touch, or (rather) I say, I never saw one body that I could say touch'd this or that other; for that if my optiques were improv'd, I should see intervalls and other bodies betwixt those wh^{ch} now seem to touch.

642. *Mem.* Upon all occasions to use the utmost modesty—to confute the mathematicians w^th^ the utmost civility & respect, not to stile them Nihilarians, &c.

643. *N. B.* To rein in y^r^ satyrical nature.

S. 644. 'Tis folly to define volition an act of the mind ordering, for neither act nor ordering can themselves be understood without volition.

645. Blame me not if I use my words sometimes in some latitude. 'Tis w^t^ cannot be helpt. 'Tis the fault of language that you cannot always apprehend the clear and determinate meaning of my words.

646. Say you, there might be a thinking Substance—something unknown—w^ch^ perceives, and supports, and ties together the ideas. Say I, make it appear there is any need of it and you shall have it for me. I care not to take away anything I can see the least reason to think should exist.

647. I affirm 'tis manifestly absurd—no excuse in y^e^ world can be given why a man should use a word without an idea. Certainly we shall find that w^t^ ever word we make use of in matter of pure reasoning has, or ought to have, a compleat idea annext to it, i.e. its meaning, or the sense we take it in, must be compleatly known.

648. 'Tis demonstrable a man can never be brought to imagine anything should exist whereof he has no idea. Whoever says he does, banters himself with words.

G. 649. We imagine a great difference & distance in respect of knowledge, power, &c., betwixt a man & a worm. The like difference betwixt man and God may be imagin'd; or infinitely greater difference.

G. 650. We find in our own minds a great number of different ideas. We may imagine in God a greater number, i.e. that ours in number, or the number of ours, is inconsiderable in respect thereof. The words difference and number, old and known, we apply to that w^ch^ is unknown. But I am embrangled in words—'tis scarce possible it should be otherwise.

651. The chief thing I do or pretend to do is onely to remove the mist or veil of words. This has occasion'd ignorance & confusion. This has ruin'd the Scholemen and Mathematicians, Lawyers and Divines.

S. 652. The grand cause of perplexity & darkness in treating of the Will, is that we imagine it to be an object of thought: (to speak with the vulgar), we think we may perceive, contemplate, and view it like any of our ideas; whereas in truth 'tis no idea, nor is there any idea of it. 'Tis *toto cœlo* different from the understanding, i.e. from all our ideas. If you say the Will, or rather a volition, is something, I answer, there is an homonymy in the word *thing*, w^n^ apply'd to ideas and volition and understanding and will. All ideas are passive. Volitions [active].

S. 653. Thing & idea are much w^t^ words of the same extent and meaning. Why, therefore, do I not use the word thing? *Answ.* Because thing is of greater latitude than idea. Thing comprehends also volitions or actions. Now these are no ideas.

S. 654. There can be perception w^th^out volition. *Qu.* whether there can be volition without perception?

E. 655. Existence not conceivable without perception or volition—not distinguish'd therefrom.

T. 656. *N. B.* Several distinct ideas can be perceived by sight and touch at once. Not so by the other senses. 'Tis this diversity of sensations in other senses chiefly, but sometimes in touch and sight (as also diversity of volitions, whereof there cannot be more than one at once, or rather, it seems there cannot, for of that I doubt), gives us the idea of time—or *is* time itself.

657. W^t^ would the solitary man think of number?

S. 658. There are innate ideas, i.e. ideas created with us.

S. 659. Locke seems to be mistaken w^n^ he says thought is not essential to the mind.

S. 660. Certainly the mind always and constantly thinks: and we know this too. In sleep and trances the mind *exists not*—there is no time, no succession of ideas.

S. 661. To say the mind exists without thinking is a contradiction, nonsense, nothing.

S. 662. Folly to inquire w^t^ determines the Will. Uneasiness, &c. are ideas, therefore unactive, therefore can do nothing, therefore cannot determine the Will.

S. 663. Again, w^t^ mean you by determine?

N. 664. For want of rightly understanding time, motion,
T. existence, &c., men are forc'd into such absurd contradictions as this, viz. light moves 16 diameters of earth in a second of time.

S. 665. 'Twas the opinion that ideas could exist unperceiv'd, or before perception, that made men think perception was somewhat different from the idea perceived,

i.e. y^{t} it was an idea of reflection; whereas the thing perceiv'd was an idea of sensation. I say, 'twas this made 'em think the understanding took it in, receiv'd it from without; w^{ch} could never be did not they think it existed without.

S. 666. To ask, have we an idea of Will or volition, is nonsense. An idea can resemble nothing but an idea.

M. 667. ‹Properly speaking, idea is the picture of the imagination's making. This is y^{e} likeness of, and refer'd to the real idea, or (if you will) thing.›

S. 668. If you ask w^{t} thing it is that wills, I answer, if you mean idea by the word thing, or anything like any idea, then I say, 'tis no thing at all that wills. This how extravagant soever it may seem, yet is a certain truth. We are cheated by these general terms, thing, is, &c.

S. 669. Again, if by is you mean is perceived, or do's perceive, I say nothing w^{ch} is perceived or does perceive wills.

S. 670. The referring ideas to things w^{ch} are not ideas, the using the term 'idea of', is one great cause of mistake, as in other matters, so also in this.

S. 671. Some words there are w^{ch} do not stand for ideas, viz. particles, will, &c. ‹Particles stand for volitions and their concomitant ideas.›

672. There seem to be but two colours w^{ch} are simple ideas, viz. those exhibited by the most and least refrangible rays; being the intermediate ones, may be formed by composition.

S. 673. I have no idea of a volition or act of the mind, neither has any other intelligence; for that were a contradiction.

674. *N. B.* Simple ideas, viz. colours, are not devoid of all sort of composition, tho' it must be granted they are not made up of distinguishable ideas. Yet there is another sort of composition. Men are wont to call those things compounded in which we do not actually discover the component ingredients. Bodies are said to be compounded of Chymical principles, w^ch^, nevertheless, come not into view till after the dissolution of the bodies—& w^ch^ were not, could not, be discerned in the bodies whilst remaining entire.

S. 675. If by Idea you mean object of the Understanding, then certainly the will is no Idea, or we have no idea annext to the word will.

I. 676. All our knowledge is about particular ideas, according to Locke. All our sensations are particular ideas, as is evident. W^t^ use then do we make of abstract general ideas, since we neither know nor perceive them?

S. 677. 'Tis allow'd that particles stand not for ideas, and yet they are not said to be empty useless sounds. The truth really is, they stand for operations of the mind, i.e. volitions.

Mo. 678. Locke says all our knowledge is about particulars. If so, pray w^t^ is the following ratiocination but a jumble of words? 'Omnis homo est animal; omne animal vivit: ergo omnis homo vivit'. It amounts (if you annex particular ideas to the words 'animal' and 'vivit') to no more than this: 'Omnis homo est homo; omnis homo est homo: ergo, omnis homo est homo'. A mere sport and trifling with sounds.

Mo. 679. We have no ideas of vertues & vices, no ideas of moral actions. Wherefore it may be question'd whether we are capable of arriving at demonstration about them, the morality consisting in the volition chiefly.

E. 680. Strange it is that men should be at a loss to find their idea of Existence; since that (if such there be distinct from perception) it is brought into the mind by all the ways of sensation and reflection, methinks it should be most familiar to us, and we best acquainted with it.

E. 681. This I am sure, I have no idea of Existence, or annext to the word Existence. And if others have that's nothing to me; they can never make me sensible of it; simple ideas being incommunicable by language.

S. 682. Say you, the unknown substratum of volitions & ideas is something whereof I have no idea. I ask, Is there any other being which has or can have an idea of it? If there be, then it must be itself an idea; which you will think absurd.

S. 683. ‹There is somewhat active in most perceptions, i.e. such as ensue upon our volitions, such as we can prevent and stop: e.g. I turn my eyes towards the sun: I open them. All this is active.›

S. 684. Things are twofold—active or inactive. The existence of active things is to act; of inactive to be perceiv'd.

S. 685. Distinct from or without perception there is no
E. volition; therefore neither is there existence without perception.

G. 686. God may comprehend all ideas, even the ideas wch are painfull & unpleasant, without being in any

degree pained thereby. Thus we ourselves can imagine the pain of a burn, &c. without any misery or uneasiness at all.

N. 687. Truth, three sorts thereof—natural, mathematical, Mo. & moral.

Mo. 688. Agreement of relation onely where numbers do obtain: of co-existence, in nature: of signification or including or thinking by including, in morality.

I. 689. Gyant who shakes the mountain that's on him must be acknowledged. Or rather thus: I am no more to be reckon'd stronger than Locke than a pigmy should be reckon'd stronger than a Gyant, because he could throw off the molehill w^{ch} lay upon him, and the Gyant could onely shake or shove the mountain that oppressed him. This in the Preface.

I. 690. Promise to extend our knowledge & clear it of those shamefull contradictions which embarrass it. Something like this to begin the Introduction in a modest way.

I. 691. Whoever shall pretend to censure any part, I desire he would read out the whole, else he may perhaps not understand me. In the Preface or Introd:

S. 692. Doctrine of identity best explain'd by takeing the Will for Volitions, the Understanding for Ideas. The difficulty of consciousness of w^{t} are never acted surely solv'd thereby.

I. 693. I must acknowledge myself beholding to the philosophers who have gone before me. They have given good rules, tho' certainly they do not always observe them. Similitude of adventurers, who, tho' they attained not the desired port, they by their wrecks have

made known the rocks and sands, whereby the passage of aftercomers is made more secure & easy. Pref: or Introd.

Mo. 694. The opinion that men had ideas of moral actions has render'd the demonstrating ethiques very difficult to them.

S. 695. An idea being itself unactive cannot be the resemblance or image of an active thing.

I. 696. Excuse to be made in the Introduction for the using the word *idea*, viz. because it has obtain'd. But a caution must be added.

697. Scripture and possibility are the onely proofs with Malbranch. Add to these what he calls a great propension to think so: this perhaps may be questioned. Perhaps men, if they think before they speak, will not be found so thoroughly persuaded of the existence of Matter.

M. 698. ‹On second thoughts I am on t'other extream. I am certain of that w^ch^ Malbranch seems to doubt of, viz. the existence of bodies.›

I.&c. 699. *Mem.* To bring the killing blow at the last, e.g. in the matter of abstraction to bring Locke's general triangle at the last.

I. 700. They give good rules, tho' perhaps they themselves do not always observe them. They speak much of clear and distinct ideas, though at the same time they talk of general abstract ideas, &c. I'll [instance] in Locke's opinion of abstraction, he being as clear a writer as I have met with. Such was the candour of this man that I perswade myself, were he alive, he would not be offended that I differ from him: seeing that even

in so doing I follow his advice, viz. to use my own judgement, see with my own eyes, & not with another's. Introd:

S. 701. The word thing, as comprising or standing for idea & volition, usefull; as standing for idea and archetype without the mind, mischievous and useless.

Mo. 702. To demonstrate morality it seems one need only make a dictionary of words, and see which included which. At least, this is the greatest part and bulk of the work.

Mo. 703. Locke's instances of demonstration in morality are, according to his own rule, trifling propositions.

P. 704. *Qu.* How comes it that some ideas are confessedly
S. allow'd by all to be onely in the mind, and others as generally taken to be without the mind, if, according to you, all are equally and only in the mind? *Ans.* Because that in proportion to pleasure or pain ideas are attended with desire, exertion, and other actions which include volition. Now volition is by all granted to be in spirit.

I. 705. If men would lay aside words in thinking, 'tis impossible they should ever mistake, save only in matters of fact. I mean it seems impossible they should be positive & secure that anything was true w^{ch} in truth is not so. Certainly I cannot err in matter of simple perception. So far as we can in reasoning go without the help of signs, there we have certain knowledge. Indeed, in long deductions made by signs there may be slips of memory.

Mo. 706. From my doctrine there follows a cure for pride. We are only to be praised for those things which are

our own, or of our own doing; natural abilitys are not consequences of our volitions.

M. 707. *Mem.* Candidly to take notice that Locke holds some dangerous opinions; such as the infinity and eternity of Space and the possibility of Matter's thinking.

I. 708. Once more I desire my reader may be upon his guard against the fallacy of words. Let him beware that I do not impose on him by plausible empty talk, that common dangerous way of cheating men into absurditys. Let him not regard my words any otherwise than as occasions of bringing into his mind determin'd significations. So far as they fail of this they are gibberish, jargon, & deserve not the name of language. I desire & warn him not to expect to find truth in my book, or anywhere but in his own mind. W^{t}ever I see myself 'tis impossible I can paint it out in words.

Mo. 709. *N. B.* To consider well w^{t} is meant by that w^{ch} Locke saith concerning algebra—that it supplys intermediate ideas. Also to think of a method affording the same use in morals &c. that this doth in mathematiques.

Mo. 710. *Homo* is not proved to be *vivens* by means of any intermediate idea. I don't fully agree wth Locke in w^{t} he says concerning sagacity in finding out intermediate ideas in matter capable of demonstration & the use thereof; as if that were the onely means of improving and enlarging demonstrative knowledge.

S. 711. There is a difference betwixt Power & Volition. There may be Volition without Power. But there can be no Power without Volition. Power implyeth Voli-

tion, & at the same time a connotation of the Effects following the Volition.

M. 712. We have assuredly an idea of substance. 'Twas
S. absurd of Locke to think we had a name without a meaning. This might prove acceptable to the Stillingfleetians.

M. 713. The substance of Body we know. The substance
S. of Spirit we do not know—it not being knowable, it being a *purus actus*.

I. 714. Words have ruin'd and overrun all the Sciences —Law, Physique, Chymistry, Astrology, &c.

I. 715. Abstract ideas only to be had amongst the learned. The vulgar never think they have any such, nor truly do they find any want of them. Genera & species & abstract ideas are terms unknown to them.

S. 716. Locke's out—the case is different. We can have an idea of Body without motion, but not of Soul without Thought.

Mo. 717. God ought to be worship'd. This easily demonstrated when once we ascertain the signification of the word God, worship, ought.

S. 718. No perception, according to Locke, is active. Therefore no perception (i.e. no idea) can be the image of, or like unto, that which is altogether active & not at all passive, i. e. the Will.

S. 719. I can will the calling to mind something that is past, tho' at the same time that w^{ch} I call to mind was not in my thoughts before that volition of mine, & consequently I could have had no uneasiness for the want of it.

S. 720. The Will & the Understanding may very well be thought two distinct beings.

S. 721. Sed quia voluntas raro agit nisi ducente desiderio. V. Locke, Epistles, p. 479, ad Limburgum.

722. You cannot say the M. T. [minimum tangibile] is like or one with the M. V. [minimum visibile], because they be both Minima, just perceiv'd, and next door to nothing. You may as well say the M. T. is the same with or like unto a sound, so small that it is scarce perceiv'd.

723. Extension seems to be a mode of some tangible or sensible quality according as it is seen or felt.

S. 724. The spirit—the active thing—that w^{ch} is soul, & God—is the Will alone. The ideas are effects—impotent things.

S. 725. The concrete of the will & understanding I must call mind; not person, lest offence be given, there being but one volition acknowledged to be God. *Mem.* Carefully to omit Defining of Person, or making much mention of it.

S. 726. You ask, do these volitions make *one* Will? W^{t} you ask is meerly about a word—unite being no more.

727. *N. B.* To use utmost caution not to give the least handle of offence to the Church or Church-men.

I. 728. Even to speak somewhat favourably of the Schoolmen, and shew that they who blame them for jargon are not free of it themselves. Introd.

729. [Introd.] Locke's great oversight seems to be that he did not begin with his third book; at least that he had not some thought of it at first. Certainly the 2^{d} & 4th books don't agree wth w^{t} he says in y^{e} 3^{d}.

M. 730. If Matter is once allow'd to exist, clippings of

words and parings of nails may think, for ought that Locke can tell; tho' he seems positive of the contrary.

731. Since I say men cannot mistake in short reasoning about things demonstrable, if they lay aside words, it will be expected this Treatise will contain nothing but w^{t} is certain & evident demonstration, & in truth I hope you will find nothing in it but what is such. Certainly I take it all for such. Introd.

I. 732. When I say I will reject all propositions wherein I know not fully and adequately and clearly, so far as knowable, the thing meant thereby, this is not to be extended to propositions in the Scripture. I speak of matters of Reason and Philosophy—not Revelation. In this I think an humble, implicit faith becomes us just (when we cannot comprehend & understand the proposition), such as a popish peasant gives to propositions he hears at mass in Latin. This proud men may call blind, popish, implicit, irrational. For my part I think it is more irrational to pretend to dispute at, cavil, and ridicule holy mysteries, i.e. propositions about things that are altogether above our knowledge, out of our reach. W^{n} I shall come to plenary knowledge of the meaning of any fact, then I shall yield an explicit belief. Introd.

733. Complexation of ideas twofold. Y^{s} refers to colours being complex ideas.

734. Considering length without breadth is considering any length, be the breadth w^{t} it will.

M. 735. I may say earth, plants, &c. were created before man—there being other intelligences to perceive them, before man was created.

M. 736. There is a Philosopher who says we can get an idea of substance by no way of sensation or reflection, & seems to imagine that we want a sense proper for it. Truly if we had a new sense it could only give us a new idea. Now I suppose he will not say substance, according to him, is an idea. For my part, I own I have no idea can stand for substance in his and the Schoolmen's sense of that word. But take it in the common vulgar sense, & then we see and feel substance.

E. 737. *N. B.* That not common usage, but the Schoolmen coined the word Existence, supposed to stand for an abstract general idea.

738. Writers of Optics mistaken in their principles both in judging of magnitudes and distances.

I. 739. 'Tis evident y^{t} w^{n} the solitary man should be taught to speak, the words would give him no other new ideas (save only the sounds, and complex ideas which, tho' unknown before, may be signified by language) beside w^{t} he had before. If he had not, could not have, an abstract idea before, he cannot have it after he is taught to speak.

Mo. 740. 'Homo est Homo', &c. comes at last to Petrus est Petrus, &c. Now, if these identical propositions are sought after in the mind, they will not be found. There are no identical mental propositions. 'Tis all about sounds and terms.

Mo. 741. Hence we see the doctrine of certainty by ideas, and proving by intermediate ideas, comes to nothing.

Mo. 742. We may have certainty & knowledge without

ideas, i.e. without other ideas than the words, and their standing for one idea, i.e. their being to be used indifferently.

Mo. 743. It seems to me that we have no certainty about ideas, but onely about words. 'Tis improper to say, I am certain I see, I feel, &c. There are no mental propositions form'd answering to these words, & in simple perception 'tis allowed by all there is no affirmation or negation, and consequently no certainty.

744. ⟨This seems wrong. Certainty, real certainty, is of sensible ideas. I may be certain without affirmation or negation.⟩

Mo. 745. The reason why we can demonstrate so well about signs is, that they are perfectly arbitrary & in our power—made at pleasure.

Mo. 746. The obscure ambiguous term *relation*, w^{ch} is said to be the largest field of knowledge, confounds us, deceives us.

Mo. 747. Let any man shew me a demonstration, not verbal, that does not depend on some false principle; or at best on some principle of nature, which is y^{e} effect of God's will, and we know not how soon it may be changed.

I. 748. *Qu.* W^{t} becomes of the *æternæ veritates*? *Ans.* They vanish.

I. 749. But say you, I find it very difficult to look beneath the words and uncover my ideas. Say I, use will make it easy. In the sequel of my Book the cause of this difficulty shall be more clearly made out.

I. 750. To view the deformity of errour we need onely undress it.

E. 751. 'Cogito ergo sum.' Tautology. No mental proposition answering thereto.

N. Mo. 752. Knowledge, or certainty, or perception of agreement of ideas—as to identity and diversity, and real existence, vanisheth; of relation, becometh merely nominal; of co-existence, remaineth. Locke thought in this latter our knowledge was little or nothing. Whereas in this onely real knowledge seemeth to be found.

P. 753. We must wth the mob place certainty in the senses. 754. 'Tis a man's duty, 'tis the fruit of friendship, to speak well of his friend. Wonder not therefore that I do w^{t} I do.

I. 755. A man of slow parts may overtake truth, &c. Introd. Even my shortsightedness might perhaps be aiding to me in this matter—'twill make me bring the object nearer to my thoughts. A purblind person, &c. Introd.

S. 756. Locke to Limborch, &c. Talk of *judicium intellectus* preceding the volition: I think *judicium* includes volition. I can by no means distinguish these—*judicium*, *intellectus*, *indifferentia*, uneasiness to many things accompanying or preceding every volition, as e.g. the motion of my hand.

S. 757. *Qu.* W^{t} mean you by my perceptions, my volitions? Both all the perceptions I perceive or conceive, &c. are mine; all the volitions I am conscious to are mine.

S. 758. Homo est agens liberum. What mean they by *homo* and *agens* in this place?

E. 759. Will any man say that brutes have y^{e} ideas of

Unity & Existence? I believe not. Yet if they are suggested by all the ways of sensation, 'tis strange they should want them.

I. 760. It is a strange thing and deserves our attention, that the more time and pains men have consum'd in the study of philosophy, by so much the more they look upon themselves to be ignorant & weak creatures. They discover flaws and imperfections in their faculties w^{ch} other men never spy out. They find themselves under a necessity of admitting many inconsistent, irreconcilable opinions for true. There is nothing they touch with their hand, or behold with their eyes, but has its dark sides much larger and more numerous than w^{t} is perceived, & at length turn scepticks, at least in most things. I imagine all this proceeds from, &c. Exord. Introd.

I. 761. These men with a supercilious pride disdain the common single information of sense. They grasp at knowledge by sheaves & bundles. ('Tis well if, catching at too much at once, they hold nothing but emptiness & air.) They in the depth of their understanding contemplate abstract ideas.

762. It seems not improbable that the most comprehensive & sublime intellects see more m.v.'s at once, i.e. that their visual systems are the largest.

763. Words (by them meaning all sort of signs) are so necessary that, instead of being (w^{n} duly us'd or in their own nature) prejudicial to the advancement of knowlege, or an hindrance to knowledge, without them there could in mathematiques themselves be no demonstration.

764. *Mem.* To be eternally banishing Metaphisics, &c., and recalling men to Common Sense.

S. 765. We cannot conceive other minds besides our own but as so many selves. We suppose ourselves affected wth such & such thoughts & such & such sensations.

S. 766. *Qu.* whether composition of ideas be not that I. faculty which chiefly serves to discriminate us from brutes? I question whether a brute does or can imagine a blue horse or chimera.

N. 767. Naturalists do not distinguish betwixt cause and occasion. Useful to enquire after co-existing ideas or occasions.

Mo. 768. Morality may be demonstrated as mixt mathematics.

S. 769. Perception is passive, but this not distinct from idea. Therefore there can be no idea of volition.

M. 770. Why I use not the word thing instead of Idea? Introd.

771. Algebraic species or letters are denominations of denominations. Therefore Arithmetic to be treated of before Algebra.

772. 2 crowns are called ten shillings. Hence may appear the nature of numbers.

773. Complex ideas are the creatures of the mind. Hence may appear the nature of numbers. This to be deeply discuss'd.

774. I am better inform'd & shall know more by telling me there are 10,000 men, than by shewing me them all drawn up. I shall better be able to judge of the bargain you'd have me make w^{n} you tell me how much (i.e.

the name of y^e^) money lies on y^e^ table, than by offering & shewing it without naming. In short I regard not the idea, the looks, but the names. Hence may appear the nature of numbers.

775. Children are unacquainted with numbers till they have made some progress in language. This could not be if they were ideas suggested by all the senses.

776. Numbers are nothing but names—never words.

777. *Mem.* Imaginary roots—to unravel that mystery.

778. Ideas of utility are annexed to numbers.

779. In arithmetical problems men seek not any idea of number. They only seek a denomination. This is all can be of use to them.

780. Take away the signs from Arithmetic & Algebra, & pray w^t^ remains?

781. These are sciences purely verbal, and entirely useless but for Practice in societys of men. No speculative knowlege, no comparing of ideas in them.

Mo. 782. Sensual Pleasure is the *summum bonum*. This the Great Principle of Morality. This once rightly understood, all the Doctrines, even the severest of the Gospels, may cleerly be Demonstrated.

783. *Qu.* whether Geometry may not properly be reckon'd among the mixt mathematics—Arithmetic & Algebra being the only abstracted pure, i.e. entirely nominal—Geometry being an application of these to points?

Mo. 784. Locke of Trifling Propositions. [b. 4. c. 8] *Mem.* Well to observe & con over that chapter.

E. 785. Existence, Extension, &c. are abstract, i.e. no

ideas. They are words, unknown and useless to the vulgar.

Mo. 786. Sensual pleasure, quâ pleasure, is good & desirable by a wise man. But if it be contemptible, 'tis not quâ pleasure but quâ pain, or cause of pain, or (wch is the same thing) of loss of greater pleasure.

I. 787. Wn I consider, the more objects we see at once the more distant they are, and that eye wch beholds a great many things can see none of them near.

I. 788. By *idea* I mean any sensible or imaginable thing.

S. 789. Agreeable to my Doctrine of Certainty. He that acts not in order to the obtaining of eternal happyness must be an infidel at least he is not Certain of a future Judgement.

S. 790. To be sure or certain of wt we do not actually perceive (I say perceive, not imagine), we must not be altogether passive; there must be a disposition to act; there must be assent, wch is active. Nay, wt do I talk; there must be actual volition.

791. Wt do we demonstrate in Geometry but that lines are equal or unequal? i.e. may or may not be called by the same name.

I. 792. I approve of this axiom of the Schoolemen, 'Nihil est in intellectu quod non prius fuit in sensu'.

M. I wish they had stuck to it. It had never taught them the doctrine of abstract ideas.

S. 793. 'Nihil dat quod non habet', or, the effect is con-
G. tained in the cause, is an axiom I do not understand or believe to be true.

E. 794. Whoever shall cast his eyes on the writings of old or new philosophers, and see the noise is made about formal and objective Being, Will, &c.

G. 795. Absurd to argue the existence of God from his idea. We have no idea of God. 'Tis impossible.

M. 796. Cause of much errour & confusion that men
E. knew not w^{t} was meant by Reality.

I. 797. Descartes, in Med. 2, says the notion of this particular wax is less clear than that of wax in general; and in the same Med., a little before, he forbears to consider bodies in general, because (says he) these general conceptions are usually confused.

M. 798. Descartes, in Med. 3, calls himself a thinking sub-
S. stance, & a stone an extended substance; & adds that they both agree in this, that they are substances & in the next paragraph he calls extension a mode of substance.

S. 799. 'Tis commonly said by the Philosophers, that if the soul of man were self-existent it would have given itself all possible perfection. This I do not understand.

Mo. 800. *Mem.* To excite men to the pleasures of the eye & the ear, w^{ch} surfeit not, nor bring those evils after them, as others.

S. 801. We see no variety or difference betwixt volitions, only between their effects. 'Tis one Will, one Act—distinguished by the effects. This Will, this Act, is the Spirit, i.e. operative principle, soul, &c. No mention of fears and jealousies, nothing like a party.

M. 802. Locke in his 4th Book, and Descartes in Med. 6, use the same argument for the existence of objects, viz. that sometimes we see, feel, &c. against our will.

S. 803. While I exist or have any idea, I am eternally, constantly willing; my acquiescing in the present state is willing.

E. 804. The existence of any thing imaginable is nothing different from imagination or perception. Volition or Will, w^{ch} is not imaginable, regard must not be had to its existence at least in the First Book.

Mo. 805. There are four sorts of Propositions:—'Gold is a metall'; 'Gold is yellow'; 'Gold is fixt'; ⟨also of non-coexistence as gold is not blue⟩ 'Gold is not a stone'—of w^{ch} y^{e} 1st 2^{d} & 3^{d} are only nominal, and have no mental propositions answering them.

M. 806. *Mem.* In vindication of the senses effectually to confute what Descartes saith in the last par. of the last Med., viz. that the senses oftener inform him falsely than truely. That sense of pain tells me not my foot is bruised or broken, but I, having frequently observed these two ideas, viz. of that peculiar pain and bruised foot go together, do erroneously take them to be inseparable by a necessity of Nature—as if Nature were anything but the ordinance of the free will of God.

M. 807. Descartes owns we know not a substance im-
S. mediately by itself, but by this alone, that it is the subject of several acts. Answer to 2^{d} objection of Hobbs.

S. 808. Hobbs in some degree falls in with Locke, saying thought is to the mind or himself as dancing to the dancer. Object.

S. 809. Hobbs in his Object. 3 ridicules those expressions of the scholastiques—'the will wills', &c. So does Locke. I am of another mind.

S. 810. Descartes, in answer to Object. 3 of Hobbs, owns

he is distinct from thought as a thing from its modus or manner.

E. 811. Opinion that existence was distinct from percep-
S. tion of horrible consequence. It is the foundation of Hobbs's doctrine, &c.

M. 812. Malbranch in his illustration differs widely from
P. me. He doubts of the existence of bodies. I doubt not
E. in the least of this.

P. 813. I differ from Cartesians in that I make extension, colour, &c. to exist really in bodies independent of our mind. All y^{s} carefully and lucidly to be set forth.

M. 814. Not to mention the combinations of powers, but
P. to say the things—the effects themselves—to really exist, even w^{n} not actually perceived; but still with relation to perception.

815. The great use of the Indian figures above the Roman shews arithmetic to be about signs, not ideas—or not ideas different from the characters themselves.

M. 816. Reasoning there may be about things or ideas, or
N. actions; but demonstration can be only verbal. I question, no matter &c.

G. 817. Quoth Descartes, The idea of God is not made by me, for I can neither add to nor subtract from it. No more can he add to or take from any other idea, even of his own making.

S. 818. The not distinguishing 'twixt Will and ideas is a grand mistake with Hobbs. He takes those things for nothing which are not ideas.

M. 819. Say you, At this rate all's nothing but idea—mere

phantasm. I answer, everything as real as ever. I hope to call a thing idea makes it not the less real. Truly I should perhaps have stuck to the word thing, and not mentioned the word idea, were it not for a reason, and I think a good one too, w^ch I shall give in the Second Book.

I. 820. Idea is the object or subject of thought. Y^t I think
S. on, w^t ever it be, I call idea. Thought itself, or thinking, is no idea. 'Tis an act—i.e. volition, i.e. as contra-distinguished to effects—the Will.

I. 821. Locke, in B. 4. c. 5, assigns not the right cause
Mo. why mental propositions are so difficult. It is not because of complex but because of abstract ideas. Y^e idea of a horse is as complex as that of fortitude. Yet in saying the 'horse is white' I form a mental proposition with ease. But w^n I say 'fortitude is a virtue', I shall find a mental proposition hardly, or not at all to be come at.

S. 822. Pure intellect I understand not.

823. Locke is in y^e right in those things wherein he differs from y^e Cartesians, and they cannot but allow of his opinions, if they stick to their own principles or causes of Existence & other abstract ideas.

G. 824. The propertys of all things are in God, i.e. there
S. is in the Deity Understanding as well as Will. He is no blind agent, and in truth a blind agent is a contradiction.

G. 825. I am certain there is a God, tho' I do not perceive Him—have no intuition of Him. This not difficult if we rightly understand w^t is meant by certainty.

S. 826. It seems that the Soul, taken for the Will, is immortal, incorruptible.

S. 827. *Qu.* whether perception must of necessity precede volition?

S. 828. Errour is not in the Understanding, but in the Mo. Will. What I understand or perceive, that I understand. There can be no errour in this.

Mo. 829. *Mem.* To take notice of Locke's woman afraid of N. a wetting, in the Introd., to shew there may be reasoning about ideas or things.

M. 830. Say Descartes & Malbranch, God hath given us strong inclinations to think our ideas proceed from Bodies, or that Bodies do exist. Pray w^t^ mean they by this? Would they have it that the ideas of imagination are images of, and proceed from, the ideas of sense? This is true, but cannot be their meaning; for they speak of ideas of sense themselves as proceeding from, being like unto—I know not w^t^.

M. 831. Cartesius per ideam vult omne id quod habet esse S. objectivum in intellectu. V. Tract. de Methodo.

S. 832. *Qu.* May not there be an Understanding without a Will?

S. 833. Understanding is in some sort an action.

S. 834. Silly of Hobbs, &c. to speak of y^e^ Will as if it were motion, w^th^ w^ch^ it has no likeness.

M. 835. Ideas of Sense are the Real things or Archetypes. Ideas of Imagination, Dreams, &c. are copies, images, of these.

M. 836. My doctrines rightly understood, all that Philosophy of Epicurus, Hobbs, Spinosa, &c., w^ch^ has been a declared enemy of religion, comes to the ground.

G. 837. Hobbs & Spinosa make God extended. Locke also seems to do the same.

I. 838. Ens, res, aliquid dicuntur termini transcendentales.

E. Spinosa, p. 76, prop. 40, Eth. part 2, gives an odd account of their original. Also of the original of all universals—Homo, Canis, &c.

G. 839. Spinosa (vid. Præf. Opera Posthum.) will have God to be 'omnium rerum causa immanens', and to countenance this produces that of St. Paul, 'in Him we live', &c. Now this of St. Paul may be explained by my doctrine as well as Spinosa's, or Locke's, or Hobbs's, or Raphson's, &c.

S. 840. The Will is *purus actus*, or rather pure spirit not imaginable, not sensible, not intelligible, in no wise the object of the understanding, no wise perceivable.

S. 841. Substance of a spirit is that it acts, causes, wills, operates, or if you please (to avoid the quibble y^{t} may be made on y^{e} word 'it') to act, cause, will, operate. Its substance is not knowable, not being an idea.

G. 842. Why may we not conceive it possible for God to create things out of nothing? Certainly we ourselves create in some wise whenever we imagine.

G. 843. 'Ex nihilo nihil fit.' This (saith Spinoza, Op:
N. Posth. p. 464) and the like are called *veritates æternæ*, because 'nullam fidem habent extra mentem'. To make this axiom have a positive signification, one should express it thus: Every idea has a cause, i.e. is produced by a Will.

P. 844. The Philosophers talk much of a distinction 'twixt absolute & relative things, or 'twixt things considered

in their own nature & the same things considered with respect to us. I know not wt they mean by 'things considered in themselves'. This is nonsense, jargon.

S. 845. It seems there can be no perception—no idea—without Will, seeing there are no ideas so indifferent but one had rather have them than annihilation, or annihilation than them. Or if there be such an equal Ballance, there must be an equal mixture of pleasure and pain to cause it; there being no ideas perfectly void of all pain & uneasiness, but wt are preferable to annihilation.

846. Recipe in animum tuum, per cogitationem vehementem, rerum ipsarum, non literarum aut sonorum imagines. Hobbs against Wallis.

847. 'Tis a perfection we may imagine in superior spirits, that they can see a great deal at once with the utmost clearness and distinction; whereas we can only see a point.

M. 848. Treating of matter I had better say the proportion & Beauty of Things than their species (wch Locke hath proved already) are the workmanship of the Mind.

849. *Mem.* Wn I treat of mathematiques to enquire into the controversy 'twixt Hobbes and Wallis.

G. 850. Every sensation of mine, wch happens in consequence of the general known laws of nature, & is from without, i.e. independent of my will, demonstrates the Being of a God, i.e. of an unextended, incorporeal spirit, wch is omnipresent, omnipotent, &c.

Mo. 851. One great cause of miscarriage in men's affairs is that they too much regard the Present.

M. 852. I say not with J. S. [John Sergeant] that we *see* solids. I reject his 'solid philosophy'—solidity being only perceived by touch.

S. 853. It seems to me that will and understanding—volitions and ideas—cannot be severed, that either cannot be possibly without the other.

E. 854. Some ideas or other I must have, so long as I
S. exist or will. But no one idea or sort of ideas being essential.

M. 855. The distinction between idea and ideatum I cannot otherwise conceive than by making one the effect or consequence of dream, reverie, imagination—the other of sense and the constant laws of nature.

P. 856. Dico quod extensio non concipitur in se et per se, contra quam dicit Spinoza in Ep. 1ª ad Oldenburgium.

G. 857. My definition of the word God I think much clearer than that of Descartes & Spinoza, viz. 'Ens summe perfectum & absolute infinitum', or 'Ens constans infinitis attributis, quorum unumquodque est infinitum'.

858. 'Tis chiefly the connexion betwixt tangible and visible ideas that deceives, and not the visible ideas themselves.

S. 859. But the grand mistake is that we know not what we mean by 'we', our 'selves', our 'mind', &c. 'Tis most sure & certain that our ideas are distinct from the mind, i.e. the Will, the Spirit.

S. 860. I must mention the understanding as a faculty or

part of the mind. I must include understanding & will &c. in the word Spirit—by w^ch^ I mean all that is active. I must not say that the understanding differs not from the particular ideas, or the will from particular volitions.

S. 861. The Spirit, the Mind, is neither a volition nor an idea.

N. 862. I say there are no causes (properly speaking) but
S. spiritual, nothing active but Spirit. Say you, This is only verbal; 'tis only annexing a new sort of signification to the word cause, & why may not others as well retain the old one, and call one idea the cause of another which always follows it? I answer, If you do so I shall drive you into many absurditys. I say you cannot avoid running into opinions you'll be glad to disown, if you stick firmly to that signification of the word Cause.

Mo. 863. In valuing good we reckon too much on the present & our own.

Mo. 864. There be two sorts of pleasure. The one is ordained as a spur or incitement to somewhat else, & has a visible relation and subordination thereto; the other is not. Thus the pleasure of eating is of the former sort, of musick is y^e^ later sort. These may be used for recreation, those not but in order to their end.

Mo. 865. Three sorts of useful knowledge—that of Co-
N. existence, to be treated of in our Principles of Natural Philosophy; that of Relation, in Mathematiques; that of Definition, or inclusion, or words (which perhaps differs not from that of relation), in Morality.

S. 866. Will, understanding, desire, hatred, &c., so far forth as they are acts or active, differ not. All their difference consists in their objects, circumstances, &c.

N. 867. We must carefully distinguish betwixt two sorts of causes—physical & spirituall.

N. 868. These may more properly be called occasions. Yet (to comply) we may call them causes—but then we must mean causes y^{t} do nothing.

S. 869. According to Locke, we must be in an eternal uneasyness so long as we live, bating the time of sleep or trance, &c.; for he will have even the continuance of an action to be in his sense an action, & so requires a volition, & this an uneasiness.

I. 870. I must not pretend to promise much of demonstration. I must cancell all passages that look like that sort of pride, that raising of expectation in my Readers.

I. 871. If this be the case, surely a man had better not philosophize at all: no more than a deformed person ought to cavil to behold himself by the reflex light of a mirrour.

I. 872. Or thus, like deformed persons who, having beheld themselves by the reflex light of a mirrour, are displeased with their diseases.

M. 873. What can an idea be like but another idea? We can compare it with nothing else—a sound like a sound, a colour like a colour.

M. 874. Is it not nonsense to say a smell is like a thing w^{ch} cannot be smelt, a colour is like a thing which cannot be seen?

M. S. 875. Bodies exist without the mind, i.e. are not the mind, but distinct from it. This I allow, the mind being altogether different therefrom.

P. 876. Certainly we should not see motion if there was no diversity of colours.

P. 877. Motion is an abstract idea, i.e. there is no such idea that can be conceived by itself.

I. 878. Contradictions cannot be both true. Men are obliged to answer objections drawn from consequences. Introd.

S. 879. The Will and Volition are words not used by the vulgar. The learned are bantered by their meaning abstract ideas.

880. Speculative Math. as if a man was all day making hard knots on purpose to unty them again.

881. Tho' it might have been otherwise, yet it is convenient the same thing w^{ch} is M. V. should be also M. T., or very near it.

S. 882. I must not give the soul or mind the scholastique name 'pure act', but rather pure spirit, or active being.

S. 883. I must not say the Will & Understanding are all one, but that they are both abstract ideas, i.e. none at all —they not being even *ratione* different from the Spirit, *quâ* faculties, or active.

S. 884. Dangerous to make idea & thing terms convertible. That were the way to prove spirits are nothing.

Mo. 885. *Qu.* whether *veritas* stands not for an abstract idea?

M. 886. 'Tis plain the moderns must by their own principles own there are no bodies, i.e. no sort of bodies without the mind, i.e. unperceived.

S. 887. *Qu.* whether the Will can be the object of pre-
G. science or any knowledge?

P. 888. If there were only one ball in the world, it could not be moved. There could be no variety of appearance.

889. According to the doctrine of infinite divisibility, there must be some smell of a rose, v.g. at an infinite distance from it.

M. 890. Extension, tho' it exist only in the mind, yet is no property of the mind. The mind can exist without it, tho' it cannot without the mind. But in Book 2 I shall at large shew the difference there is betwixt the Soul and Body or extended being.

S. 891. 'Tis an absurd question w^ch^ Locke puts, whether man be free to will?

892. *Mem.* To enquire into the reason of the rule for determining questions in Algebra.

893. It has already been observed by others that names are nowhere of more necessary use than in numbering.

M. 894. I will grant you that extension, colour, &c. may
P. be said to be without the mind in a double respect, i.e. as independent of our will, and as distinct from the mind.

Mo. 895. Certainly it is not impossible but a man may
N. arrive at the knowledge of all real truth as well without as with signs, had he a memory and imagination most strong and capacious. Therefore reasoning & science doth not altogether depend upon words or names.

N. 896. I think not that things fall out of necessity. The connexion of no two ideas is necessary; 'tis all the result of freedom, i.e. 'tis all voluntary.

M. 897. One single Idea can be the pattern or resemblance

only of another. So far as they differ one cannot resemble the other.

M. 898. If a man with his eyes shut imagines to himself
S. the sun & firmament, you will not say *he* or *his mind* is the sun, or extended, tho' neither sun or firmament be without his mind.

S. 899. 'Tis strange to find philosophers doubting & disputing whether they have ideas of spiritual things or no. Surely 'tis easy to know. Vid. De Vries, *de id: In.* p. 64.

900. De Vries will have it that we know the mind as we do Hunger not by idea but sensation conscientia. So will Malbranch. This a vain distinction.

901. August 28th, 1708. The Adventure of the [Shirt?].

902. It were to be wished that persons of the greatest birth, honour, & fortune, would take that care of themselves, by Education, Industry, Literature, & a love of virtue, to surpass all other men in knowledge & all other qualifications necessary for great actions, as far as they do in Quality & Titles; that Princes out of them might always choose men fit for all employments and high trusts. Clov. B. 7.

903. ‹These arguments must be proposed shorter and more separate in the Treatise.›

904. 1. All significant words stand for ideas.

905. 2. All knowledge about our ideas.

906. 3. All ideas come from without or from within.

907. 4. If from without it must be by the senses, & they are call'd sensations.

908. 5. If from within they are the operations of the mind, & are called thoughts.
909. 6. No sensation can be in a senseless thing.
910. 7. No thought can be in a thoughtless thing.
911. 8. All our ideas are either sensations or thoughts, by 3, 4, 5.
912. 9. None of our ideas can be in a thing w^{ch} is both thoughtless & senseless, 6, 7, 8.
913. 10. The bare passive reception or having of ideas is call'd perception.
914. 11. Whatever has in it an idea, tho' it be never so passive, tho' it exert no manner of act about it, yet it must perceive. 10.
915. 12. All ideas either are simple ideas, or made up of simple ideas.
916. 13. That thing w^{ch} is like unto another thing must agree wth it in one or more simple ideas.
917. 14. Whatever is like a simple idea must either be another simple idea of the same sort, or contain a simple idea of the same sort. 13.
918. 15. Nothing like an idea can be in an unperceiving thing. 11, 14. Another demonstration of the same thing.
919. 16. Two things cannot be said to be alike or unlike till they have been compar'd.
920. 17. Comparing is the viewing two ideas together, & marking w^{t} they agree in and w^{t} they disagree in.
921. 18. The mind can compare nothing but its own ideas. 17.
922. 19. Nothing like an idea can be in an unperceiving thing. 11, 16, 18.

923. *N. B.* Other arguments innumerable, both *a priori* & *a posteriori*, drawn from all the sciences, from the clearest, plainest, most obvious truths, whereby to demonstrate the Principle, i.e. that neither our ideas, nor anything like our ideas, can possibly be in an unperceiving thing.

924. *N. B.* Not one argument of any kind w^t^soever, certain or probable, *a priori* or *a posteriori*, from any art or science, from either sense or reason, against it.

925. Mathematicians have no right idea of angles. Hence angles of contact wrongly apply'd to prove extension divisible *ad infinitum*.

926. We have got the Algebra of pure intelligences.

927. We can prove Newton's propositions more accurately, more easily, & upon truer principles than himself. ⟨To the utmost accuracy, wanting nothing of perfection. *Their* solutions of problems, themselves must own to fall infinitely short of perfection.⟩

928. Barrow owns the downfall of geometry. However I'll endeavour to rescue it—so far as it is useful, or real, or imaginable, or intelligible. But for *the nothings*, I'll leave them to their admirers.

929. I'll teach any one the whole course of mathematiques in $\frac{1}{100}$ part the time that another will.

930. Much banter got from the prefaces of the mathematicians.

931. Innumerable vessels if matter. V. Cheyne.

P. 932. Newton says colour is in the subtil matter. Hence Malbranch proves nothing, or is mistaken in asserting there is onely figure & motion therein.

933. I can square the circle, &c.; they cannot. W^ch goes on the best principles?

934. The Billys use a finite visible line for an $\frac{1}{m}$.

T. 935. Marsilius Ficinus—his appearing the moment he died solv'd by my idea of time.

M. 936. The philosophers lose their Matter. The mathematicians loose their insensible sensations. The profane [lose] their extended Deity. Pray w^t do the rest of mankind lose? As for bodies, &c., we have them still.

937. *N.B.* The future philosoph. & mathem. get vastly by the bargain.

P. 938. There are men who say there are insensible extensions. There are others who say the wall is not white, the fire is not hot, &c. We Irishmen cannot attain to these truths.

939. The mathematicians think there are insensible lines. About these they harangue: these cut in a point at all angles: these are divisible *ad infinitum*. We Irishmen can conceive no such lines.

940. The mathematicians talk of w^t they call a point. This, they say, is not altogether nothing, nor is it downright something. Now we Irishmen are apt to think something & nothing are next neighbours.

941. I can square the circle &c. they cannot, w^ch goes on the best principles?

942. Engagements to P. on account of y^e Treatise that grew up under his eye; on account also of his approving my harangue. Glorious for P. to be the protector of usefull tho' newly discover'd truths.

943. How could I venture thoughts into the world be-

fore I knew they would be of use to the world? and how could I know that till I had try'd how they suited other men's ideas?

944. I publish not this so much for anything else as to know whether other men have the same ideas as we Irishmen. This is my end, & not to be inform'd as to my own particular.

945. The Materialists & Nihilarians need not be of a party.

946. *Qu:* Is power a simple idea, seeing it includes relation.

947. *Qu:* Are we blameable w^n a passion (as sometimes) like a hurricane takes away our liberty.

948. How can hope not be much different from desire, seeing one's a pleasure, t'other a pain.

949. Liberty not consists in suspension.

950. The will in case of suspension & examination is not determin'd from without.

951. According to Locke we have not liberty as to virtue & vice, liberty consisting in an indifferency of y^e operative faculties to act or not to act, w^{ch} is consecutive to the will, but virtue & vice consist in the will, ergo. vid. c. 21. b. 2. s. 71.

952. Whether is a spirit mov'd w^{th} absolute or relative motion or w^{th} both.

953. Ideas of substances seem to be adequate.

EDITOR'S NOTES

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I. These statutes are written, not in Berkeley's handwriting, in the manuscript on folios 97–100. They are reprinted in Campbell Fraser's *Life and Letters of Berkeley*, pp. 24–25. I suggested in my *Development of Berkeley's Philosophy* (p. 17) that Samuel Molyneux was Secretary of the Society, and that the statutes were written by him in the President's book, for his guidance in directing the discussions. The reasons for the conjecture that Berkeley was President of the Society and Molyneux Secretary are, in the main, the following: The date of the foundation of the Society is January 10, 1705/6, and there is in existence a manuscript of Berkeley's—the *Description of the Cave of Dunmore*—bearing the same date, which was almost certainly read by Berkeley at the first meeting of the Society. (See *Hermathena*, XI, 181.) And it seems probable that the inaugural paper would be read by the President.

That Samuel Molyneux was Secretary is suggested by the fact that the manuscript just referred to and the manuscript of Berkeley's essay *Of Infinites* (which was apparently read to the same Society) were discovered among the Molyneux papers in the library of Trinity College, Dublin, and both bear an endorsement in the writing of Samuel Molyneux. (*Hermathena*, XI, 181.) Now it is one of the statutes of the Society 'that the Secretary have the charge of all papers belonging to the Society'. (Campbell Fraser, *Life and Letters of Berkeley*, p. 24.)

II. The 'Queries', i.e. the entries numbered II–XXIV, all refer, in some cases with exact references, to Locke's *Essay on the Human Understanding*. Their form suggests that these notes have an intimate connection with Berkeley's Society. They are either notes which he made with a view to a discussion on Locke to take place at a meeting of the Society, or a record of the main points raised at such a meeting.

XXIV. After entry XXIV, the manuscript contains the rules

of the Society agreed upon on December 7, 1706. Like those of January 10, 1705/6, they are not in Berkeley's handwriting. They are reprinted in Campbell Fraser's *Life and Letters of Berkeley*, p. 26. They may refer to a new Society, but it is generally agreed as being more probable that they merely constitute a revision of the constitution of the original Society.

3. The question whether the succession of ideas is in the mind of God is answered by Berkeley in the *Principles* in the negative. The succession of ideas, though it exists *for* God's mind, is not *in* it. God is the cause of the ideas, but these ideas do not pass in succession through his mind.

4. 'Time being nothing, abstracted from the succession of ideas in our minds, it follows that the duration of any finite spirit must be estimated by the number of ideas or actions succeeding each other in that same spirit or mind.' *Principles*, § 98.

5. Time exists only so long as it endures. The existence of time is nothing but its duration. Existence in general simply means duration. As time, i.e. duration, is relative, it would appear to follow that all existence is relative.

7. If time is only the succession of ideas, it must be relative to the particular percipient, and it must also be relative to the particular state of the particular percipient.

9. The unit of time varies from person to person.

13. The important word here is 'onely'. Berkeley maintains that there is only one kind of time, i.e. relative time. Newton, whose theory he has throughout in view, had maintained that there are two kinds of time, absolute and relative. 'Tempus absolutum, verum & mathematicum, in se & natura sua sine relatione ad externum quodvis, aequabiliter fluit, alioque nomine dicitur duratio: Relativum, apparens & vulgare est sensibilis & externa quaevis durationis per motum mensura (seu accurate seu inaequabilis) qua vulgus vice veri temporis utitur; ut hora, dies, mensis, annus.' (*Principia*, Scholium ad def. viii.) In saying that things exist only in the mind, Berkeley does not mean to suggest that they actually have their locus within the ego, or that they are particular psychical existents falling within the mental process of an individual mind. The phrase 'in the mind' is apt to

suggest spatial considerations, for it seems to indicate that mind is a sort of receptacle, 'an empty casket' in Locke's terminology, into which ideas may or may not be put. But when Berkeley speaks of mind he means mind, and not brain. When he says that a thing exists in the mind, all he means is that it exists, not in the brain, but in the subject-object relationship. (*Dialogues*, I, 453; cf. I, 455.) The existence of things consists in being in mind in the sense that they are in relation to mind.

18. The extension of one and the same object appears different to the same eye in different positions, and to different eyes in the same position. Such variation in the extension of a body would not be possible, Berkeley urges, if the extension were really in the body; and we must conclude that its extension, like its colour, depends on being perceived. 'Without the mind' does not mean *extra mentem*, but *sine mente*.

19. The 'immaterial hypothesis' is Berkeley's own view. He is already preoccupied with showing that on this view the world of things still remains. 'By the principles premised we are not deprived of any one thing in nature.... Whatever we see, feel, hear or anywise conceive or understand, remains as secure as ever, and is as real as ever. There is a *rerum natura*.' *Principles*, § 34.

20. The qualities of things had been distinguished by Locke, Descartes, and others into two classes, primary and secondary. Primary qualities comprise extension, figure, motion, rest, solidity, and number; all others, e.g. colours, tastes, sounds, and the like, being termed secondary. According to the distinction previously accepted, primary qualities exist *in* the things, though secondary ones do not. This distinction between primary and secondary qualities was questioned by Berkeley. He agrees that secondary qualities have no existence apart from perception, but he maintains that the existence of all primary qualities also consists in being perceived. All the arguments by which the mind-dependent existence of secondary qualities had been supported apply also, in his judgment, to primaries.

24. For Berkeley, the world consists of spirits, i.e. 'conceiving thoughts', and ideas, i.e. 'all other things'. But ideas

are entirely dependent, if they are presentations, on God; and if they are representations, on finite spirits. Thus spirits alone have an independent existence.

27. Berkeley gives a negative answer to this question in the *New Theory of Vision* (1, 186). His view is that motion, together with extension and figure, as perceived by touch, differ from motion, extension and figure as perceived by sight. A man born blind would not, on receiving his sight, identify his visual sensations with his previously acquired tactual sensations. Berkeley is fond of referring to the first visual experiences of the born-blind man made to see. (*New Theory of Vision*, §§ 41, 42, 79, 92–9, 103, 106, 110, 128, 132–7.) And in the Appendix (added in the second edition) he refers to the case of William Jones, a born-blind man restored to sight at the age of twenty. (An account of this case is to be found in the *Tatler* of August 16, 1709.) Very little fresh evidence on the point has come to light. The most important is Cheselden's case (*Philosophical Transactions*, 1728), which has usually been regarded as confirmatory of Berkeley's theory, though Hamilton (Reid's *Works*, 1, 137 n.) and Abbott (*Sight and Touch*, 145–8) think otherwise. Descriptions of a few other cases are to be seen in the *Philosophical Transactions* for 1801, 1807, 1826 and 1841. An interesting case of successful operation on a born-blind man, which seems to support the Berkeleian view, is described by Latta in the *British Journal of Psychology*, 1, 135.

29. On Berkeley's view, the mathematical doctrine of the incommensurability of the side and the diagonal of the square must be rejected. For since both the side and the diagonal of the square are composed of a finite number of points, the relation between these lines will always be capable of integral numerical expression.

30. Newton had distinguished absolute motion from relative motion. 'Motus absolutus est translatio corporis de loco absoluto in locum absolutum, relativus de relativo in relativum.' (*Principia*, Scholium ad def. viii.) Berkeley in the *Principles* criticises Newton's conception of absolute motion and maintains that all motion is relative.

32. This problem was discussed by Locke in the second edition of the *Essay* (II, ii, 8). The problem is this. Suppose a born-blind man has been taught to distinguish by touch a cube and a sphere. If he were then made to see, would he at first be able by sight to distinguish between a sphere and a cube standing on a table out of his reach? Both Molyneux (1656–98) and Locke answer in the negative. The born-blind man would have to learn by experience which object previously known by tactual experience is referred to by each set of visual sensations. The connection between tactual sensations and visual sensations involved in our sense-knowledge of the same object is wholly empirical. This is precisely Berkeley's view. Berkeley refers to this matter in the *New Theory of Vision* (§ 132).

41. In other words, the only existence external to the mind, corresponding to primary ideas, consists in powers. In Berkeley's view, the permanence of things cannot depend on our finite minds. It is based on the fact that they exist as powers, or potentially, in the mind of God.

42. Hecht suggests that the reference is to E. W. von Tschirnhaus, whose work *Medicina mentis et corporis* appeared in Amsterdam in 1687.

47. Berkeley attacks the doctrine of representative perception, as maintained by Locke and Descartes, according to which the mind perceives the external world by means of intermediate ideas regarded as copies of the real things. This doctrine must be distinguished from Berkeley's own theory of representative knowledge by signs. According to Berkeley's theory, which is a theory of inference, in universal knowledge we must have intermediate and representative factors on which to reason. But perception is in an entirely different position from that: perception involves, Berkeley believes, no inference or reasoning; it is a direct and immediate relation of the mind to idea-things.

68. Berkeley had not yet made up his mind to deny matter completely. His detailed criticism of matter was afterwards elaborated in the *Principles*, §§ 34 ff. and in *Three Dialogues* I, 439 ff.

74. According to a variety of the materialist view, which Berkeley here has in mind, matter may be inferred to be *like* our

ideas. Even if we admit, the materialist argues, that matter is imperceptible, there may exist material entities corresponding with, and similar to, the ideas that we actually perceive; and these material entities guarantee the regularity and self-consistency of the groups of sensations which we experience under determinate sets of circumstances.

Against this view Berkeley brings two objections. (i) He points out that it is universally acknowledged, even by materialists, that our sensations, differing according to the conditions under which we are affected, are exceedingly variable. If, then, as the materialist assumes, the material thing resembles the idea, it must at one and the same time, while still remaining the same material thing, be like several dissimilar ideas. And that, Berkeley holds, is a contradiction in terms. He argues, further, that since we perceive only our own ideas, or are aware only of our own sensations, matter, if it exists, cannot be like these ideas or sensations. For a sensation cannot be similar in nature to what is *ex hypothesi* ultimately insensible. An idea of sensation cannot be like what is not an idea of sensation. Conversely, what is given as insensible, i.e. matter, cannot be like a sensation.

75. Isaac Barrow (1630–77), Newton's predecessor at Cambridge, published in 1669 his *Lectiones opticae et geometricae*, which had been revised by Newton, and in 1683 his mathematical lectures were published under the title *Lectiones mathematicae*.

76. In the passage quoted Locke refers not only to primary but also to secondary qualities.

78. This argument is singularly like that by which Dr Johnson 'refuted' Berkeley's 'idealism' by striking his foot against a stone.

80. Michel-Angelo Fardella (1650–1718), Italian physicist and metaphysician, maintained on lines singularly similar to Malebranche's arguments that the existence of the material world could not be scientifically proved, and could only be maintained by faith in revelation. He wrote *Universae Philosophiae Systema*, 1691; *Universae usualis mathematicae theoria*, 1691; *Logica*, 1696; and *Animae humanae natura*, 1698.

81. Locke deals with sensitive knowledge in the *Essay*, IV, xi. Berkeley maintains that knowledge in sense-perception is not mere opinion, as Locke held, but gives absolute certainty. And certain knowledge is possible also in demonstration. But by demonstration Berkeley does not mean, as Locke did, reasoning by means of intervening abstract ideas; he means reasoning by means of words or signs. It is noteworthy that Berkeley still accepts the conception of an 'unknown substratum', against which, in the *Principles* and *Three Dialogues*, he argued strongly.

84. This conclusion would follow from the view that *Esse est percipere*, the existence of human beings consists only in perceiving. When we are not actually perceiving, then we are in a state of annihilation. This view was never seriously maintained by Berkeley. His dominant conception, indications of which are given elsewhere in the *Commonplace Book*, is that human personality has a certain permanence.

85. Is the only power God, or are human beings also powers? The view which Berkeley worked out later is that spirits differ in the degree of their reality, the gradation being conceived in terms of activity. God is pure activity, and is thus completely and ultimately real. Finite spirits are active, inasmuch as they will, operate in the world, and cause representations; but, since they can create neither selves nor presentations, their activity is inferior to God's; and, as percipient of presentations created by God, their nature includes the element of passivity, which is entirely absent from God. Thus, as (*a*) incompletely active, and (*b*) partially passive, finite persons are less real than God; and they may be considered to occupy a position intermediate between God and things. Least real of all, possessing, indeed, only relative and dependent reality, come things or ideas. These are entirely inactive; their nature is wholly passive and inert.

98. In dealing with the problem of space, Berkeley has in view throughout the distinction drawn by Newton and Locke between relative and particular space on the one hand, and absolute and universal space on the other. Absolute space for Newton remains always self-identical and immovable, whereas relative space or dimension is the measure of absolute space, and is known

by the relation which objects bear to our faculties of sense-perception.[1] Newton's theory is repeated, in essence, in Locke's distinction between pure space and place, Locke's place corresponding roughly with Newton's relative space, and his pure space with Newton's absolute space.

In opposition to Locke and Newton Berkeley argues that, as absolute or pure space is an impossibility, the distinctions which they had been at such pains to establish are strictly meaningless. He examines with some care in *De Motu* the characteristics of such knowledge as sense-perception, imagination, and pure intellect; and concludes that absolute space is in nowise knowable, and must accordingly be admitted to be *merum nihil*.

103. Cf. *New Theory of Vision*, §§ 149–59, where Berkeley concludes that 'neither abstract nor visible extension makes the object of geometry'.

104. Cf. *New Theory of Vision*, § 88.

108. This aphorism provides an interesting illustration of the explanations which commentators may be forced to give as a result of erroneous transcription of the manuscript. Fraser prints *now* for *nor*, which is better grammar but requires the laboured explanation given by Fraser, 'By the adult, who has learned to interpret its visual signs'. Hecht gives a similar explanation, 'Ursprünglich nämlich durch Tasten'. Berkeley's real point here is to emphasise, in accordance with his theory, that depth and solidity are not perceived by sight, but by touch, and that what we consider perception by sight is a mental construct based on interpretation. Cf. *New Theory of Vision*, § 121.

114. In this paragraph Locke gives definitions of 'idea' and 'quality'.

[1] 'Spatium absolutum, natura sua sine relatione ad externum quodvis, semper manet similare et immobile: Relativum est spatii huius mensura seu dimensio quaelibet mobilis, quae a sensibus nostris per situm suum ad corporum definitur, & a vulgo pro spatio immobili usurpatur: uti dimensio spatii subterranei, aerii vel coelestis definita per situm suum ad terram.' (*Principia*, Scholium ad def. viii.)

117. Berkeley always protests against the use of the phrase 'idea of a thing', on the ground that it involves the false suggestion that the idea and the thing are different. But for Berkeley the idea is the thing perceived and the thing perceived is the idea.

120. Fraser quotes on this passage an extract from Berkeley's letter to Johnson, 'A succession of ideas I take to constitute time, and not to be only the sensible measure thereof, as Mr Locke and others think'.

125. This question was not really examined by Locke. The passage Berkeley apparently has in view is *Essay*, II, xvi, 8. But Locke does not speak of infinite number; he merely says that the meaning of the idea 'infinite' can best be made clear in connection with numbers.

127. Cf. *New Theory of Vision*, §§ 67–77.

128. Cf. *New Theory of Vision*, §§ 88–120.

129. Deering is the name of one of the branches of the Percival family, several members of which were known to Berkeley.

133. Berkeley gives a detailed formulation of this argument in the *Three Dialogues* (I, 429 ff.).

139. Why are we dependent on the deliveries of only two senses for our perception of extension?

146. Berkeley already foresees the danger of attack on his doctrine on the ground of its subjectivism; therefore here he goes to the opposite extreme and claims objectivity for what is really subjective.

156. Berkeley here follows Locke to some extent. He uses Locke's conception of complex ideas. Locke distinguished clearly between simple ideas and complex ideas. Simple ideas are the ultimate unanalysable elements of all knowledge, and in its apprehension of them the mind is wholly passive and receptive. On the other hand, in complex ideas, which result from the union or composition of several simple ideas, the active operation of the mind is displayed. Regarding simple ideas as the material and foundation of all knowledge, the mind combines, by determinate processes, certain of them which are regularly found together in our experience into aggregates or compounds; and

to each of the complex ideas thus formed we assign a name, and come to regard it as representing one thing.

158. The essential connection of morality with the will is strongly emphasised in the *Commonplace Book*. The morality of an action, Berkeley says, depends chiefly on the volition. Berkeley simply takes it for granted that the will is free. To say that man wills is tantamount to saying that he is free. An unfree will is a contradiction in terms. The will is self-determining, and no external force can act upon it so as to limit or determine it. No idea can affect it, because all ideas are passive and inert; and no passion can move it, because it is the nature of the self to be superior to the passions. The will is simply another name for the self in the conative side of its activity.

164. Berkeley here has in view Locke's comparison between mathematics and ethics. For Locke, mathematics and ethics are both demonstrated on the basis of certain axioms and definitions. Between moral ideas there are the same necessary relations as hold between mathematical ideas. Locke admits that ethics is not popularly placed on the same level of demonstrative certainty as mathematics, but that is because it is more difficult in ethics than in mathematics to reach agreement with regard to the names to be applied to ideas. If men could reach agreement in their definitions of moral ideas, then the whole science of ethics would be seen to follow analytically from these definitions. (IV, iii, 18; cf. III, xi, 16.)

178. This question is dealt with in the Introduction to the *Principles*.

179. In the *Principles* Berkeley maintains that we have not ideas but notions of the operations of the mind. For Berkeley's theory of notions see my *Development of Berkeley's Philosophy*, pp. 161 ff.

181. Jean Le Clerc (Clericus) (1657–1736) translated in 1688 an extract from Locke's *Inquiry* into French. In 1698 he published *Opera philosophica*. The passage referred to by Berkeley is ch. 8, par. 5 of Part I of the *Opera*, *Logica sive ars ratiocinandi*.

185. Berkeley holds that the connection is a purely arbitrary one.

189. Berkeley's view at this period is that colours in the dark have a potential existence. They would exist actually if there were light, so that they could be perceived.

197. Berkeley believes that neither persons nor things have identity, if identity means durational continuity.

200. Berkeley's doctrine of volition was to have been developed in Part II of the *Principles*, along with the general theory of spirit; and as it is, we have only suggestions towards a doctrine. The first and most important point is that the will is not a separate faculty. In his view, faculties are vicious abstractions, and all he means by the will is spirit as willing. In the attitude of willing spirit is active and causative, exercising a real productivity in the world. And as the will is merely one aspect of the spirit, the activity of the will is present in all the experience of a finite spirit. Presentational experience as such is not, it is true, active; but, inasmuch as it *is* the experience of a spirit, it is accompanied by or pervaded with volitional activity. Willing is thus simply the conative or active aspect of experience; and, as activity is the most fundamental characteristic of spirit, the will is the most fundamental aspect of the unity of the mind. It is willing, then, rather than knowing that constitutes personal identity.

206. Personal identity is connected, Berkeley believes, more closely with conative experience than with cognitive. Thinking only *partly* constitutes identity of personality, inasmuch as it is only as I reflect on the experience I had a year ago that I recognise my identity with what I then was. As the activity of spirit is what really constitutes its existence, it is improbable that its self-identity will consist in one aspect of its existence, viz. thinking, which manifests its activity only very imperfectly.

208. A man asleep is potentially conscious in two senses of the word. He is naturally potentially conscious inasmuch as he will be conscious when he awakes. He is preternaturally potentially conscious inasmuch as he exists in the mind of God.

214. Cf. *New Theory of Vision*, §§ 52–61.

215. Cf. *Principles*, §§ 101–34.

220. This refers to the Introduction to the *Principles*.

225. In reality, Berkeley maintains, just as the element of inference or judgment is necessary to enable us to interpret the sounds we hear as thoughts, so inference and judgment are necessary to enable us to interpret visual data as extension.

229. Cf. *New Theory of Vision*, § 140.

230. Only ideas, i.e. perception, give us immediate or direct knowledge. Knowledge of the laws of nature is indirect and more liable to error.

236. Cf. *New Theory of Vision*, §§ 107–8.

237. An early statement of the criticism of materialism, later developed fully in the *Principles* and the *Three Dialogues*.

239. It is impossible to know the soul by idea on Berkeley's conception, because to know the soul by idea in his view is to perceive the soul. But Malebranche's Divine Ideas are akin to the 'notions', the theory of which Berkeley developed in the *Principles*; or the 'Ideas', the theory of which he sketched in *Siris*.

240. In every case inference is involved.

243. Berkeley has in view Descartes, Hobbes and Spinoza, who consider that matter is composed of corpuscles. Berkeley denies the existence of these material corpuscles.

245. Berkeley's new principle involved difficulties with regard to the nature of mathematics. The new principle implies that lines consist of a finite number of points, that surfaces consist of a finite number of lines, and that solids consist of a finite number of surfaces. Thus ultimately all geometrical figures consist of complexes of points, which are regarded by Berkeley as ultimate indivisibles. These indivisibles are *minima sensibilia*, the minutest possible objects of sense. It is impossible that the *minima sensibilia* should be divisible, because in that case we should have something of which our senses could not make us aware; and that, Berkeley believes, is simply a contradiction.

253. Cf. *New Theory of Vision*, § 71.

254. Berkeley's view is that any visible or tangible circle, i.e. any actually constructed circle, may be squared approximately; and it is therefore time thrown away to invent general methods for the quadrature of all circles.

258. Cf. Malebranche, *Recherche de la Vérité*, 1, 6.

263. For this view of 'considering', as distinct from having an idea of, Berkeley later substituted the doctrine of notions.

264. xtallines = crystallines. Cf. *Recherche de la Vérité*, 1, 6. In this chapter Malebranche deals with the sources of error in visual perception.

265. m.v. = *minimum visibile.*
s.v. = *sphaera visualis.*

266. Malebranche defends his view with many appeals to curious biological observation.

270. 'Demonstrable' is clearly a *lapsus calami* for 'demonstrate'.

276. If points are visible units, the answer to this question must necessarily be in the negative.

282. Berkeley believes that the *minimum visibile* and the *minimum tangibile* are extended, but he realises the difficulties to which this view gives rise.

284. If all lines consist of a finite number of *minima sensibilia*, then no lines consisting of an uneven number of *minima sensibilia* will be capable of exact bisection. Berkeley therefore suggests that, for practical purposes, small errors may be neglected. Though we cannot bisect a line consisting of 5 points, we can divide it into two parts, one containing 3 points, the other 2; and, as the *minimum sensibile* is so minute, it makes no practical difference if the two lines are only approximately equal. Berkeley was influenced to make this suggestion by the method of neglecting differences practised in the calculus. If differentials, which are admitted to be something, are overlooked under certain circumstances in the calculus, are we not justified in the new geometry, Berkeley asks, in neglecting everything less than the *minimum sensibile*? The resulting errors will be so slight that the usefulness of geometry, which it must be remembered is a practical science, will not be impaired.

286. Cf. *New Theory of Vision*, §§ 88–119.

297. One of the conceptions of matter against which Berkeley argues in the *Principles* is that it is an utterly unknown and undefinable quiddity, wholly without attributes and qualities.

Against this conception of matter Berkeley uses several arguments. *Principles*, §§ 80–1.

299. Berkeley's whole aim is to struggle equally against materialism and an ultimate dualism.

308. The reference to Locke relates to *Essay*, II, xv, 3. Henry More (1614–87), together with Ralph Cudworth (1617–88), the representative of 'Cambridge Platonism'. Joseph Raphson wrote *De spatio reali seu ente infinito* (1697) and a *History of Fluxions*. See Berkeley's Letter to Johnson of 1730 (Fraser's *Life*, p. 177).

310. Berkeley himself was later in *Siris* to use 'the lofty and Platonic strain'.

313. Cf. *New Theory of Vision*, § 73.

316. Berkeley believes firmly in the existence and reality of the world of things. With regard to his belief in the reality of things he is at one with most previous philosophers. Where he differs from his predecessors is in the interpretation he puts upon the *meaning* of reality.

319. Charles Hayes (1678–1760) wrote a *Treatise of Fluxions* (1704). John Keill (1671–1721) wrote an *Introductio ad veram physicam* (1702) and also (on fluxions) in the *Philosophical Transactions* of the Royal Society. He took a prominent part in the famous 'Priority Controversy' in which he accused Leibniz of having derived the fundamental ideas of his calculus from Newton.

324. It was audacious to attack mathematics, for in Berkeley's day mathematics had acquired extraordinary prestige. See my *Development of Berkeley's Philosophy*, pp. 75–9.

325. The conception of the infinitesimal rests, Berkeley believes, on the supposition that extension is infinitely divisible. And mathematicians who maintain the doctrine of divisibility *ad infinitum* commit, in his view, three serious errors. He enumerates these errors in the *Commonplace Book*, aphorism 355. It will be noticed that, with the exception of the third, these are faults only on Berkeley's own metaphysical theory.

327. In this passage Newton deals with time, space, and movement as absolute and as relative.

329. Berkeley devotes much care in the *Principles* to criticising the doctrine of abstract ideas. Locke's acceptance and confirmation of that doctrine is, in Berkeley's view, his greatest mistake, and one which seriously affects the value of the critical method. And in Berkeley's eyes his own great methodological reform consists in showing that any conception of abstract ideas formed according to the currently accepted theories must be avoided by a true philosophical method.

330. For Berkeley's doctrine of 'considering', cf. *Principles*, §§ 15–16.

333. On Berkeley's view it is difficult to 'imagine a minimum' because we have not been accustomed to taking note of minima. But though we are not explicitly aware of the *minima sensibilia*, they do exist separately, and may be analysed as indivisibles in the complex sense-datum presented to us in perception. Geometry, then, is an applied science dealing with finite magnitudes composed of indivisible *minima sensibilia*.

334. Keil (*sic*) = Keill.

335. By 'infinites' here Berkeley means infinitesimals.

336. M. = moment (Newton's terminology), dd = d^2 = differentials in the symbolism of Leibniz.

345. Berkeley's criticisms of Newton and Leibniz are developed chiefly in *The Analyst*. Berkeley maintains that the conception of the infinitely small, whether in the form in which it appears in Newton and his followers, or as maintained by Leibniz, is impossible. It is impossible because it is self-contradictory. Whether we regard infinitesimals with Leibniz as differences, i.e. infinitely small increments or decrements, or with Newton as fluxions, i.e. velocities of nascent or evanescent increments, they involve in their nature an ultimate contradiction.

358. Berkeley's view is that the point cannot be other than the *minimum sensibile*. If it is other than the *minimum sensibile*, it is nothing.

359. Bonaventura Cavalieri (1598–1647) was the author of *Geometria indivisibilibus continuorum nova quadam ratione promota* (1635) and *Exercitationes geometricae sex* (1647). What precisely Cavalieri meant by his conception of indivisibles is

open to doubt, but it is certain that Berkeley's sympathy would be elicited by his demonstration that quantities are composed of indivisible units, a line being made up of points, a surface of lines, and a volume of surfaces.

361. Le Clerc is at one with Malebranche in this view.

368. This is the ground of Berkeley's criticism of the calculus. If the calculus were sound, then his conception of geometry could not be maintained. For the calculus, whether in the form of Newton's theory of fluxions or Leibniz's method of differentials, rested, Berkeley believed, on the assumption of the existence of infinitely small quantities. Now, if these infinitesimals were admitted to exist, the significance of his *minima sensibilia* would disappear; and indeed the foundations of his philosophy as a whole would be seriously shaken.

369. Berkeley has in mind chiefly the doctrine of infinitesimals as developed by Newton. Newton's infinitesimals are never so self-contradictory as those of Leibniz or even of his own followers. His infinitely small quantities are not, like Leibniz's differentials, discrete particulars. The Leibnitians hold that the 'difference' of a line is an infinitely little line, the 'difference' of a plane an infinitely little plane, and so on. And Newton's own followers used the conception of infinity in an equally rash way. Thus De Moivre regards the fluxion of an area as an infinitely small rectangle, and Halley, to whom Berkeley refers in the *Commonplace Book*, speaks of infinitely small *ratiunculae* and *differentiolae* in much the same way as the Leibnitians. Hayes, again, another follower of Newton, to whom Berkeley also refers, maintains the conception of infinitely small quantities.

371. But in the Introduction to the *Principles*, § 20, Berkeley admits that words which represent no idea may perform useful functions.

374. Our senses inform us only of mind-dependent reality. The senses are therefore not responsible for the 'mistake' of believing that anything exists apart from this mind-dependent reality.

376. Berkeley makes a good many supercilious remarks on mathematics and mathematicians in the *Commonplace Book*. This

is especially the case in regard to Newton. Such entries as 'Newton begs his principles: I demonstrate mine', and 'Newton's harangue amounts to no more than that gravity is proportional to gravity' read strangely in comparison with the contemporary estimates of men who were better qualified than he to judge of the value of Newton's work. Cf. e.g. Halley's 'Nec fas est propius mortali attingere divos', and de l'Hôpital's almost serious question whether Newton ate, drank, and slept.

377. The reference is to Barrow's *Lectiones opticae et geometricae.*

378. Secondary qualities are agreed to be mind-dependent.

383. The reference is to Keill's *Introductio ad veram physicam*, lectio v.

388. Cheyne (1671–1743) wrote *Fluxionum methodus inversa* (1703) and *Philosophical Principles of Natural Religion* (1705).

391. *Essay*, IV, iv, 18; IV, v, 3; etc.

392. This is not in accordance with the more rigid terminology which Berkeley developed later. Berkeley generally confines the word 'thing' to ideas, and excludes from 'thing' that which has ideas—i.e. the conscious subject.

393. *Scaligerana secunda*, p. 270.

397. Berkeley's criticism of abstract ideas is really a twofold one. Partly it is an objection, on psychological grounds, to previously given accounts of the process by which abstract ideas are formed in individual experience; and partly it is a metaphysical examination of the problem whether any abstract ideas at all are possible.

400. Berkeley gives his own free translation in the succeeding aphorism.

404. If a thing is not actually being perceived by me, in what sense does it actually exist? To this question Berkeley suggests more than one answer. A thing not actually being perceived by me may be said to exist in the sense (*a*) that if I were in a position to perceive it I should perceive it, or (*b*) that it is actually being perceived by some other finite spirit, or (*c*) it is being constantly perceived by God. But though these grounds of permanence are all suggested by Berkeley, he does not press the first two solu-

tions. In the end, therefore, he is content to assert that the permanence of things is guaranteed by their continuous existence in the mind of God.

408. Yahweh = Jehovah.

410. Berkeley's view is that mathematics, as far as it is a practical science, is facilitated by his 'new principle'. To the objection that the new principle destroys geometry Berkeley rejoins, 'Whatever is useful in geometry, and promotes the benefit of human life, does still remain firm and unshaken on our principles'. *Principles*, § 131.

411. In this and the succeeding aphorisms Berkeley is on the level of picture-thinking.

421. The Cartesians maintain the existence of primary qualities and of bodies independent of the mind.

424. Berkeley holds that there is nothing intermediate between the mind and its object. Berkeley at first, in his zeal 'to simplify and abridge the labour of study', thought of denying the existence of both minds and things. Only ideas would be left. Of different kinds, and in various combinations, they alone would constitute the whole of experience. But though Berkeley actually suggests the banishment of both minds and external things, he insists upon it only in the case of external things.

426. Berkeley considers that his great discovery is 'existence is *percipi* or *percipere*'. He hesitates a good deal whether to affirm that the mind is active in perception. On the whole, he seems to incline to the view that (*a*) in sense-perception the mind is passive and receptive, while (*b*) in imagination (which he sometimes includes under *percipere*) the mind is active. But he also maintains that it is really volition that constitutes the activity of the mind; and, as he believes that volition is impossible apart from perception, the activity of volitional experience confers a certain degree of activity on percipient experience.

429. John Harris did much to popularise mathematics. His *New Short Treatise of Algebra . . . Together with a Specimen of the Nature and Algorithm of Fluxions* (1702) was the first elementary book on fluxions to be published in England. Ignace

Gaston Pardies (1636–73) published *Eléments de Géométrie* (Paris, 1671) which was translated in 1701 by Harris.

430. In this paragraph Berkeley holds the extreme view of Malebranche that God is the sole cause. Elsewhere in the *Commonplace Book*, however, his view is that God is the ultimate cause of all things, but the proximate cause only of immediate perceptions. Finite selves are the proximate causes of imaginative and volitional experience.

434. This is simply another way of formulating, account being taken of Berkeley's terminology, the aphorism above, 'Existence is *percipi* or *percipere*'.

438. M.T. = *minimum tangibile*, M.V. = *minimum visibile*, M.S. = *minimum sensibile*. Cf. *New Theory of Vision*, §§ 121–45.

441. The Cartesians cannot say 'pain is in my finger', because for them 'pain' is mind-dependent, but 'finger' is not. For Berkeley *both* are mind-dependent, and he therefore maintains that there is nothing self-contradictory, in his doctrine, in the statement 'pain is in my finger'.

445. Halley (1656–1742), besides his works on astronomy and magnetism, wrote on fluxions in the *Philosophical Transactions* of the Royal Society.

448. The nature of motion occupied Berkeley's attention from the very beginning. In the first page or two of the *Commonplace Book* he is troubled about the relation of tangible and visible motion, and the difficulty of reconciling Newton's two kinds of motion (i.e. absolute and relative) with the New Principle. In the *New Theory of Vision*, these problems are briefly considered (§ 137), in the *Principles* his own views are very clearly though summarily stated (§§ 10, 14, 27, 99, 101–17) and the arguments which he adduces are reinforced in the *Three Dialogues* (1, 400–403). *De Motu* is devoted almost entirely to it.

450. Locke in *Essay*, III, iv, 8, criticises attempts to define motion as involving a *petitio principii*.

456. D = Diameter. P = Periphery = Circumference.

458. George Cheyne (1671–1743), author of *Fluxionum Methodus inversa* (London, 1703) and *Philosophical Principles of Religion* (London, 1705).

460. Berkeley here has in view Locke's discussion of the problem of causality. Locke had confused his treatment of the problem by introducing an artificial distinction between the *relation* of cause and effect and the *mode* of power.

466. The reference is to Locke.

468. It follows from Berkeley's conception of the nature of geometry and his denial of incommensurables that one square can never be double another, for that is possible only on the assumption of incommensurables. And it also follows that the famous Pythagorean theorem (*Euclid*, I, 47) is false.

469. On Berkeley's concept of geometry it is no longer possible to maintain that a mean proportional may be found between any two given lines. A mean proportional will be possible, on Berkeley's theory, only in the special case where the numbers of the points contained in the two lines will, if multiplied together, produce a square number.

473. In these two paragraphs (473 and 474) Berkeley does not mean to distinguish between reason and sensation, between the intellectual and sense elements in knowledge. He uses *ratio* and *intellectus* in the widest sense to include also *percipere*.

484. Wallis's (1616–1703) *Arithmetica infinitorum* (1656) paved the way for the invention of the calculus.

487. In the *Principles* Berkeley does admit two other kinds of cause in addition to God, namely finite spirits and things. But their causality is not the same as God's.

490. Berkeley is here in agreement with his general view that for practical purposes small errors may be neglected. Newton in the Introduction to his *Quadratura curvarum* had said, 'In rebus mathematicis errores quam minimi non sunt contemnendi'. Berkeley criticises in the *Analyst* Newton's theory of fluxions on the ground that Newton did not remain consistent with this dictum.

492. In the *Principles* Berkeley does confine 'ideas' to 'things sensible'. The operations of the mind are not ideas, and we can have only notional knowledge of them.

493. The reference is to the Eleatics. Cf. *Principles*, § 89.

494. Cf. *Essay*, Book III.

497. Cf. *Essay*, III, xi, 7.

499. Berkeley has in mind the criticism of Locke's account of the formation of abstract ideas which he afterwards developed in the Introduction to the *Principles*.

500. *The New Theory of Vision* is wholly psychological, and in the *Principles* he claims that his results are based entirely on his analysis of his own experience. In regard to the method of philosophy, Berkeley followed Locke.

501. Berkeley does not clearly distinguish cause from occasion. He was much influenced by the Occasionalism of Malebranche. But his Occasionalism differs from that of Malebranche in an important respect. He carries out more consistently than Malebranche the presuppositions involved in Descartes' fundamental thesis. Berkeley retains in a one-sided form the Cartesian Occasionalism. He insists, and here he is directly following Malebranche, that the only ultimately real causation is creation.

509. Bishop Sprat's *History of the Royal Society* was published in 1667.

511. Berkeley refers several times to the second part of the *Principles*. 'As to the Second Part of my treatise concerning the Principles of Human Knowledge, the fact is that I had made a considerable progress in it; but the manuscript was lost about fourteen years ago, during my travels in Italy, and I never had leisure since to do such a disagreeable thing as writing twice on the same subject.' (Letter to Samuel Johnson, June 25, 1729.) The original edition of the *Principles* had 'Part I' on the title-page. In the second edition, which was published two or three years after this letter was written, 'Part I' was omitted. In the *Commonplace Book* there are many references to the subjects which will be dealt with in 'the Second Book' or the 'Second Part'. From these references we gather that Part II would have dealt *inter alia* with spirits, mental operations, and relations, and also with ethics. Berkeley also refers to Part II in a letter written in 1711 to Jean Leclerc. There he mentions his anxiety to have the criticism of savants on his *Principles* in order that, either encouraged by their approval, or profiting by their criticisms, he

may the sooner prepare *ad consectaria inde deducenda partemque secundam pertexendam.* (*Archiv f. Gesch. d. Phil.* XVII, 161.) There is also a reference to it in the Preface to the *Three Dialogues* (I, 376). See my *Development of Berkeley's Philosophy*, p. 146.

516. Cf. Introduction to the *Principles*, §§ 18–25.

520. Stillingfleet had charged Locke with 'discarding substance out of the reasonable part of the world'. Berkeley is anxious to avoid a similar charge.

536. Pure intellect cannot judge of lines and triangles, because according to Berkeley pure intellect has as its objects only operations of the mind and relations, and lines and triangles are neither operations of the mind nor relations.

541. The reference is to the scholastic distinction emphasised during the nominalist controversy.

548. The 'Preface' is the Preface to the *Principles*.

550. Cf. *Principles*, §§ 119–22.

553. Berkeley differs from Malebranche on the question of our responsibility for our actions. Berkeley insists that in our actions we exercise a real causality. Berkeley believes in moral responsibility and moral freedom; and he sees no way of securing them without maintaining the real activity and productivity of finite will.

554. In the section quoted Locke treats 'of the Reality of knowledge'.

559. In Locke's classification of the sciences (*Essay*, IV, xxi) the third division of knowledge is termed 'Σημειωτικὴ or the doctrine of signs'. But by this Locke means little more than logic. In Berkeley's later work he attached much importance to 'signs'. Cf. *Alciphron*, VII, § 13.

568. In Berkeley's published work he never admits the possibility of intuitive knowledge. He criticises Locke's theory of intuitive knowledge. Of all the kinds of knowledge intuition is, Locke affirms, the most certain. By it we perceive the agreement or disagreement of two ideas immediately, without any process of reasoning or inference. Berkeley maintains that intuitive knowledge is only a broken reed.

574. French is not known. Madden is probably Samuel Madden (1686–1765), who afterwards edited the *Querist*, published in three parts in 1735, 1736 and 1737.

576. The words 'Part 1' appeared on the title-page of the *Principles* when first published in 1710. They were omitted from the title-page in the second edition, but retained in the body of the work.

585. As the panacea for incorrect thinking Berkeley advocates introspection, or, as he sometimes terms it, using a scholastic word, introversion. Many of the jottings in the *Commonplace Book* are the result of his own application of the introspective method to his own experience.

586. Berkeley means to deny, as Hume afterwards did, that there is any entity apart from ideas, and asserts that the understanding is simply perceptions. Self, soul, understanding, are merely names for collections of ideas. Though Berkeley reiterates this view and is apparently satisfied with its theoretical consistency, certain practical considerations made it impossible for him to rest in it.

589. The Third Book of the *Principles* as projected by Berkeley would probably have dealt with space, time and motion.

592. Berkeley criticises Locke's doctrine of demonstrative knowledge. Demonstrative knowledge, for Locke, is not immediate; it is always mediated by other ideas, and depends on processes of reasoning which we call proofs. Demonstrative knowledge depends for its certainty on the possibility of proving relations between abstract ideas. Berkeley's own theory of demonstration is never fully worked out. Berkeley changes Locke's conceptualism into a nominalism. But this was a passing phase which was under eclipse by the time he wrote the *Principles*.

593. Is the will, as Hume was later to say, nothing but the passions? Berkeley's moral and religious interest prevented his believing this. The will must be distinct from, and superior to, the passions.

602. This is one of the questions dealt with in the Introduction to the *Principles*.

607. Berkeley's point is that if substances were perceptible by sense, they would not be substances.

609. Cf. *New Theory of Vision*, § 4.

611. In this passage Locke utters a warning against taking non-self-evident propositions as principles.

625. This is also Hegel's argument.

626. All these reappear in *Siris*.

627. As Newton does not tell us what gravity is, it is rash and indeed futile for him to ascribe the origin of motion to it. He is explaining by means of that which itself needs explanation. This is Berkeley's preliminary criticism of Newton. It is, as a matter of fact, an *ignoratio elenchi*, for Newton does not assign gravity as the ultimate cause of motion. He holds that gravity is of value in the explanation of the world of phenomena, but gravity itself needs to be caused by something else, and what this ultimate cause may be Newton never pretends to say. 'Rationem vero harum Gravitatis proprietatum ex Phaenomenis nondum potui deducere, et Hypotheses non fingo.' (*Principia*, p. 483.)

629. In *Principles*, §§ 1–33, he expounds his principles; in §§ 34–84 and also in the *Three Dialogues* he answers objections.

634. Berkeley does not seriously develop this argument in his published work. In the *Principles* and *Three Dialogues*, he does not himself classify the various views of matter which he examines, but they must be reduced to three main heads. (1) According to the first theory, matter is immediately perceived. (2) On the second view, matter is not perceived, but is *inferred* to be either, (*a*) like our ideas, though imperceptible, or (*b*) unlike our ideas, but the cause of them, or (*c*) the instrument of our ideas, or (*d*) the occasion of our ideas. (3) And according to the third main theory, matter is simply postulated as an unknown but indispensable Somewhat. Berkeley criticises each of these doctrines, but in no case is it the burden of his criticism that they reduce God to matter.

635. It is possible to demonstrate such a proposition as 'Man is free', Berkeley maintains, if we know that the definition of 'free' is included within that of 'man'. The conception of such

a purely analytic or deductive philosophy was destroyed by the criticism of Kant.

647. This is one of Berkeley's theories of universality. Universality, he believes, may be considered to belong to the names which designate actual particular things.

651. See Introduction to the *Principles*, § 24.

658. Berkeley did not believe for long in innate ideas, or intuitive knowledge. When the entities of which it was necessary to postulate an intuitive knowledge were only one or two, e.g. the self and God, such important exceptions to the general doctrine that all knowledge is sense-perception might perhaps be allowed. But as soon as it became clear to Berkeley that it would be necessary to admit an intuitive knowledge of whole classes of things, e.g. volitions and other mental operations, he realised that it would be essential to modify his early theory of knowledge.

659. Locke disagrees with the Cartesian view that because it is the essence of the mind to think therefore the mind always thinks. Berkeley criticises Locke, and returns to the Cartesian theory, for he sees clearly Locke's inconsistency. If the mind is purely passive, how does it come by complex ideas? Can the piece of white paper make marks upon itself?

667. The view stated here, akin to the doctrine of representative perception, was afterwards strongly attacked by Berkeley in his published work.

678. This is an argument in favour of universals.

679. Berkeley is here referring to Locke's view that demonstration is possible in ethics. Locke never abandoned his belief in a mathematically-demonstrated science of ethics, though he came to feel less and less able to demonstrate it himself. This is clear both from the changes which he introduced in the fourth edition of the *Essay* (compare the fourth edition with the first at IV, ii, 9) and from his letters to Molyneux.

687. Berkeley believes that there are three kinds of truth—natural, mathematical, and moral—which are to be found respectively in what he calls the three departments of useful knowledge, viz. natural philosophy, mathematics, and ethics. Thus,

in order to complete his scheme in the *Principles*, as he has already mentioned the consequences of the New Principle in two of the three departments of useful knowledge, he ought to have given some indication of the application of the theory to ethics. We know from a statement in the *Commonplace Book* that the treatise in which it was his purpose to deal with ethics was the projected Part II of the *Principles*.

688. This aphorism is repeated in a fuller and more readily intelligible form in aphorism 865 of the *Commonplace Book*. It involves reference to Locke's conception of knowledge. See my *Development of Berkeley's Philosophy*, pp. 284 ff.

690. Cf. Introduction to the *Principles*, §§ 1–5.

691. Cf. Preface to the *Principles*.

693. Berkeley's relation to his predecessors was particularly close. See my *Development of Berkeley's Philosophy*, pp. 12–75.

694. Berkeley's point is that ethics as a purely analytic science, which deals only with relations between words, is rendered practically impossible on the conception that we can have ideas of moral actions, i.e. that they can be perceived.

697. The proofs to which Berkeley refers are those of the independent existence of matter.

699. Cf. Introduction to the *Principles*, § 13.

700. Locke died in October, 1704.

702. This aphorism is rather cryptic, but if we bear in mind Berkeley's general view of the applicability of algebra in the various departments of knowledge, its meaning becomes plain. In his view, algebra is 'purely verbal' and 'entirely nominal'; it deals with relations of arbitrary signs, and demonstration is possible, when they are employed, because there is uniformity in their use. If the meaning of words were settled, propositions in ethics could be demonstrated as readily as propositions in mathematics.

703. The examples which Locke gives (IV, iii, 18) are justly said by Berkeley to be 'trifling propositions'.

707. Cf. Locke's *Essay*, II, xiii, 21; II, xvii, 4; IV, iii, 6. Locke had a controversy with Stillingfleet regarding the possibility of matter thinking.

709. Locke had given one hint of the precise way in which the mathematical method might be followed in a demonstrative moral science. Locke held that certainty means simply the agreement or disagreement of our ideas, and that demonstration consists in making clear that agreement by employing intermediate ideas or media. Now in mathematics algebra had been of use in supplying these intermediate ideas, and Locke is inclined to think that by applying algebra in ethics a demonstrably certain system will be produced.

712. Berkeley is considering the possibility of securing the support of those who agreed with Stillingfleet's criticism of Locke. But before he published any work, he realised that it would not be possible, while maintaining the consistency of his system, to admit that we have an idea of substance. For Locke's view, see *Essay*, I, iv, 18. See also Locke's letters to Stillingfleet.

713. Berkeley's view in the *Principles* does not permit him to say that we know the substance either of Body or of Spirit.

716. Cf. *Essay*, II, i, 10.

717. This is an example of Berkeley's conception of a mathematical theory of ethics.

720. This is inconsistent with Berkeley's published doctrine, which conforms to aphorism 725.

721. The quotation is from *Some Familiar Letters between Mr. Locke and several of his Friends*, London, 1708. Philippe van Limborch was a Dutch theologian, to whom some of these letters were addressed.

725. From the very first, the problem of personal identity puzzled Berkeley greatly. If we did not have the *Commonplace Book* we could never guess from his published works that he appreciated the difficulties of the problem. In the *Principles* and *Dialogues* he always writes as though perfectly convinced that personality implies a unity over and above the person's ideas and volitions. In addition to ideas, 'there is Something which knows or perceives them; and exercises divers operations . . . about them'. (*Principles*, § 2.) 'I *myself* am not my ideas, but somewhat else, a thinking, active principle that perceives, knows, wills, and operates about ideas.' (*Dialogues*, I, 450.)

727. For Berkeley's attitude to the Church and Churchmen, see my *Development of Berkeley's Philosophy*, pp. 319–59.

729. The third book of Locke's *Essay* treats of 'Words', the second of 'Ideas', and the fourth of 'Knowledge and Probability'.

732. Berkeley intended to include this passage in the Introduction to the *Principles*. It does not, in fact, appear there, no doubt because Berkeley, who was suspected of Jacobitism, considered it 'too Popish'.

736. Locke defines substance as 'an uncertain supposition of we know not what'. *Essay*, I, iv, 18.

738. This aphorism, referring to the subject-matter of the *New Theory of Vision*, appears strangely out of place here, as nearly all the aphorisms in the few pages before and after this refer to matters dealt with in the *Principles*, and even in some cases constitute first drafts of the text of the *Principles*.

741. For Locke certainty is afforded by the agreement of 'our ideas with the reality of things'. (*Essay*, IV, iv, 18.) Berkeley cannot agree with this, because he maintains that the idea is reality, and that we have no intermediate ideas, no perceptual elements intermediate between the mind and reality.

743. Berkeley is here vacillating between two views of certainty, one according to which certainty is to be found only in ratiocination, the other according to which it is immediately given in perception.

745. The use of signs in mathematics did much to suggest to Berkeley, or at least to confirm his belief in, the importance of a metaphysical theory of signs.

748. I suggested in my *Development of Berkeley's Philosophy* (p. 74) that this aphorism might refer to a fundamental doctrine of Cudworth's *Eternal and Immutable Morality*, and this suggestion was followed by Andreas Hecht in his edition of the *Commonplace Book*. (Berkeley, *Philosophisches Tagebuch*, p.158.) It is now clear to me, however, that the reference is to Spinoza. Spinoza stated (*Opera Posth.* p. 464, referred to elsewhere in the *Commonplace Book* by Berkeley) that such propositions as *Ex nihilo nihil fit* are *aeternae veritates* because *nullam fidem habent*

extra mentem. Berkeley's point is that the *aeternae veritates* vanish because there is nothing at all *extra mentem.*

751. 'Cogito ergo sum' is regarded by Berkeley as a tautology, because in his view *esse est percipere.* This does not take account of the further side of Berkeley's theory *esse est percipi.*

752. Cf. Locke's *Essay*, IV, i, 3–7; IV, iii, 7–21.

756. In *Some Familiar Letters between Mr. Locke and several of his Friends*, London, 1708.

759. This problem is referred to by Locke in his *Essay*, II, vii, 7, and by Berkeley himself in *Principles*, §§ 13 and 120.

760. Cf. Introduction to the *Principles*, § 1.

767. The word 'occasion' is used here with reference to Malebranche.

768. Berkeley means that morals is a field for applied mathematics.

780. Berkeley deals with the importance of signs in arithmetic and algebra in his *Arithmetica* and *Miscellanea Mathematica*, both of which were written in 1705, and both published in 1707.

782. Berkeley did not long maintain the view that sensual pleasure is the *summum bonum.* In the essays in the *Guardian* (1713), pleasures of sense and pleasures of reason are placed on the same level, so long as they are natural. But in *Alciphron* (1732), pleasures of sense are degraded. The view that these constitute the *summum bonum* is strongly attacked. Sense-pleasure is natural only to brutes. Reason is the highest and most characteristic element in human nature, and only rational pleasures are in a strict sense natural to man.

790. Judgment, Berkeley means, involves volition.

792. It was not long before Berkeley abandoned this view of the primacy of sense-knowledge. Though throughout his life he always maintained a distinction between two kinds of knowledge, in the end he regarded conceptual knowledge as the higher form.

795. This criticism rests on an intentional misrepresentation of Descartes' conception of the meaning of idea. For Descartes idea and conception are synonymous terms, and if his proof be attacked it must be along Kant's lines. Berkeley simply in-

terprets 'an idea of God' according to his own terminology as 'a perception of God', and he is able to show that we never do have this knowledge of God.

796. Berkeley takes great pains to explain what he means by reality and to distinguish between reality and appearance. His distinction between the real and the apparent is based on two principles. In the first place, ideas which are real things, i.e. presentations, are perceived with greater steadiness, vividness, order, and regularity than those which are merely images or representations. In the second place, the difference between presentations and representations, the real and the apparent, things and chimeras, depends on the *cause* of the ideas.

802. Cf. *Essay*, IV, xi, 5.

804. When he was making his jottings in the *Commonplace Book*, Berkeley had not yet decided whether volition was involved in perception. These two aphorisms (803 and 804) illustrate his vacillation.

806. An expression of one of Berkeley's dominant principles, that the natural order is the realm of divine arbitrariness.

812. Cf. *Recherche de la Vérité*, I, 19. In this illustration Malebranche examines the common belief that there is 'more substance' in gold and lead than in air and water.

813. They exist independent of any particular mind, but not independent of God's mind.

814. At first Berkeley was inclined to assume the existence of certain mysterious *powers* to give reality to things. But he soon recognised that such powers, of which we can give no account, are in no better case than Locke's substance, and if Locke's substance be abandoned, these obscure powers cannot be retained.

815. Berkeley deals with this point in *Arithmetica* (1707).

816. In this aphorism Berkeley has simply adopted the extreme nominalism of Hobbes. The possibility of reasoning depends on the demonstration of *words*. In reasoning about particular things we take one particular to stand for or represent other particulars of the same kind, and to designate the whole class of particulars we use one *word*.

825. Berkeley's view is that we are certain of the existence of

God, because the universe involves God as the supreme efficient and final cause.

828. Berkeley's view here is that error is not intellectual but moral.

838. Spinoza, *Ethics*, II, 40, 1.

839. Raphson wrote *Demonstratio de Deo* (1710) and also *De spatio reali seu ente infinito* (1697).

841. Spirits for Berkeley are sharply distinguished from ideas, and therefore we can have no perceptual or imaginative knowledge of spirits.

843. For Berkeley the ultimate cause is God as will.

844. This is not inconsistent with Berkeley's particularism. No things can be considered in themselves, because in themselves they do not exist. They exist only in relation to perception. As such, they are still particular.

846. John Wallis attacked in 1656 Hobbes's conception of geometry, and the dispute lasted until Hobbes's death in 1679.

852. John Sergeant (1622–1707) wrote *Solid Philosophy Asserted, against the Fancies of the Ideists* (1697) and *The Method to Science* (1696). For a short account of Sergeant's philosophy and particularly his relation to Berkeley, see my *Development of Berkeley's Philosophy*, pp. 383 ff. See also Norman C. Bradish, *John Sergeant, a forgotten critic of Descartes and Locke*, Chicago, 1929.

857. For Berkeley, God is defined ultimately not in terms of existence but in terms of cause. The former definition is Descartes' (*Meditations*, III) and the latter Spinoza's (*Epist.* II, *ad Oldenburgium*).

860. Berkeley aims at steering clear both of the Scylla of the faculty-psychology and of the Charybdis of a mere particularism such as was afterwards developed by Hume.

862. For Berkeley the causality of finite spirits manifests itself in two main forms. Finite spirits are able to create images and they are also able to produce motions. But their causality, when compared with the causality of the infinite spirit, is doubly limited. For they are impotent to create either selves or things and their ability to produce motions is imperfect.

867. Berkeley consistently denies that things can be causes. Only spirits can be causes. There is therefore no such thing as natural causality. Things can only be occasions of the happening of events, or signs that warn us that certain events will be followed by certain other events.

868. 'These' = physical causes.

875. The existence of bodies, in Berkeley's view, is merely a dependent existence. But it *is* a form of existence, which is not to be confounded with the existence of minds or spirits. Berkeley's universe is not panpsychistic.

884. To make 'idea' and 'thing' convertible terms is dangerous to spirit only if spirit is regarded as either an 'idea' or a 'thing'. And Berkeley always insists that spirit is neither.

899. Gerard de Vries, the Cartesian, and correspondent of Spinoza (27 letters in 1663 and following years) wrote *De Ideis Innatis*, *Dissertatio de Lumine*, *Dissertatio de Lumiculis*, etc.

901. None of the commentators can throw any light on this reference.

903. The nineteen numbered aphorisms which follow consist of a summary of the main points of the theory which Berkeley was to expound in the first four sections of the *Principles*.

908. In the *Principles* Berkeley never states that the term 'idea' can be used to cover thoughts or operations of the mind. See my interpretation of the first section of the *Principles* in my *Development of Berkeley's Philosophy*, pp. 143 ff.

912. See *Principles*, § 2.

926. At two points in his philosophy, Berkeley attempted to 'apply' mathematical conceptions. He applied algebra to the solution of the problems of morality, and thus endeavoured to found an Algebra of Ethics; and he sought to give an explanation of nature and its laws by means of the relation of sign and thing signified, and thus establish an Algebra of Nature.

928. By the 'nothings', Berkeley means infinitesimals.

934. Jacques de Billy (1602–79), French mathematician, the author of *Nova Geometriae clavis algebra* (1645) and other works. René de Billy was an historian.

935. Campbell Fraser points out that this is a reference to a

story related by Baronius, in the fifth volume of his *Annals*, to the effect that Marsilius Ficinus appeared after death to Michael Mercatus to assure him of the life of the human spirit after the death of the body.

937. This thesis is expounded by Berkeley in *Principles*, §§ 101–34.

942. Campbell Fraser suggests that 'P' may refer to Lord Pembroke, to whom the *Principles* were dedicated. Hecht follows this view. Rossi, however, points out that it can hardly refer to Pembroke, as Berkeley in his dedication to Pembroke speaks of himself as 'an obscure person, who has not the honour to be known to your lordship'. Rossi therefore suggests that P. may refer to Sir John Percival, to whom the *New Theory of Vision* was dedicated, and to whom Berkeley was personally known. Rossi's suggestion seems to me the more probable in spite of the fact that the reference in the aphorism is to a 'Treatise', and the *Principles* is a 'Treatise', while the *New Theory of Vision* is an 'Essay'. For Sir John Percival, see Benjamin Rand's *Berkeley and Percival*, 1914, which contains the correspondence.

944. True to this principle, Berkeley sent copies of the *Principles* to a large number of English and foreign philosophers for their criticism.

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